

## DEPARTMENT OF ENERGY

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 In the Matter of: \*  
 \*  
 U.S. DEPT OF ENERGY \*  
 WORKSHOP ON STANDARDS \*  
 FOR CLOTHES WASHERS \*  
 \*\*\*\*\*

Tuesday,  
 December 15, 1998

U.S. Dept of Energy  
 1000 Independence Ave. SW  
 Room 1E-245  
 Washington, DC 20585

The above-entitled matter came on for  
 hearing, pursuant to notice at 9:15 a.m.

## ATTENDEES:

Bryan Berringer  
 Eugene Margolis  
 Mike Rivest  
 Qonnie Laughlin  
 Larry Hawkins  
 Steve Nadel  
 Dave Goldstein  
 Steve Rosenstock  
 Wayne Morris  
 Earl Jones  
 Michael Marsollek  
 Glenn Schwantes  
 Michael Martin  
 Stephen Mariano  
 Charlie Stevens  
 Al Dietemann  
 Chad Neal  
 Alan Kessler  
 Dick Best  
 Dick Stilwell  
 Peter Biermayer  
 Jim McMahon  
 Victoria Nader

ATTENDEES: (Continued)

**EXECUTIVE COURT REPORTERS, INC.**  
**(301) 565-0064**

Lou Montvoro  
Terry Thiele  
Glen Scheede  
Tommy Holmes  
Thomas Bee  
Stephen Grover  
Tony Gregg  
Dan Barzel  
Ted Pope  
Tom Eckman  
Jack Linard  
Mike Thompson  
Dan Reicher  
Mike McCabe  
Roland Weingartner  
Brian Neal  
Tom Neal  
Dave Modtland  
Anthony Balducci

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1 M O R N I N G S E S S I O N

2 (9:15 A.M.)

3 MR. BERRINGER: I am Bryan Berringer.

4 Thanks for everybody coming in close to, this  
5 close to the holidays. This is an important step in  
6 the rulemaking.

7 I am the team leader for the Clothes Washer  
8 Workshop in the rulemaking. The following people are  
9 also on our team as you were introduced, was Qonnie  
10 Laughlin and Gene Margolis from of the Office of  
11 General Counsel and Mark Friedrichs, who is not here  
12 from the Office of Policy and International Affairs.

13 On behalf of the Department of Energy I would  
14 like to thank you all for being here today. This being  
15 the fourth public workshop that we have done under the  
16 new process since the process rule of July 15, 1996.  
17 It is has to believe it has been two years, two and a  
18 half years since we have started that process and this  
19 being two years, working on the clothes washer rule.

20 Copies of the draft reports, the slides  
21 today, if anybody needs, we have the programs that are  
22 on the web site, if you haven't gotten those. See Sandy  
23 at the table. Anything else, we have copies of the TSD  
24 and the actual Federal Register, the publication is  
25 sitting up here on the table also. If you feel

1 inclined to have that material.

2 Anybody attending today will be put on the  
3 mailing list. One of the things we would like to is  
4 probably narrow down our mailing list to people that  
5 are participating. So, we may, you may see a shorter  
6 mailing list. So, if you want to maintain, everybody  
7 that is here and that was at the last workshop, will  
8 maintain on the mailing list. And we will start new  
9 one, sort of cut it down because we have got a rather  
10 large list. So, if you know anybody that is not here  
11 that would like to remain on our mailing list, either  
12 have them contact with or Brenda Edwards-Jones, as  
13 identified in the Federal Register.

14 Comments received here today and those  
15 already submitted during the written comment period  
16 will assist us in developing the notice of proposed  
17 rule, which is planned in November of 1999 publication.

18 The following procedural items, you have  
19 heard them before, but we will go through them once  
20 more. I will be presiding officer over the workshop.  
21 Victoria Nader is our facilitator for the workshop,  
22 will be setting the guidelines for conducting the  
23 workshop and for providing information as we go along,  
24 parking lots and so forth. And you may remember  
25 Victoria, she was involved in our first process

1 improvement workshop. She was handling one of the  
2 breakout sessions.

3 In approximately two weeks the transcript  
4 should be available, in the Freedom of Information  
5 room, which is down the hall in 1E-190. You can also  
6 make arrangements with the court reporter if you would  
7 like to purchase a copy from them.

8 To provide the Department with as much  
9 pertinent information that can be viewed and reasonably  
10 obtained and that everybody gets their views, the  
11 workshop will be in accordance with these following  
12 procedures:

13 Obviously, the focus of this workshop is to  
14 listen to your comments on the supplemental proposed  
15 rulemaking. Receive data information to help the  
16 Department in their analysis, the preliminary analysis  
17 and also receive comments on information pertaining to  
18 the Notice of Proposed Rulemaking, the next steps. We  
19 are going to go over the methodologies and so forth  
20 this afternoon, which is on the agenda.

21 We will take a lunch break about noon, as  
22 appropriate. There is a snack bar downstairs. There  
23 is the cafeteria down in the West wing of the building.  
24 There is also some restaurants up at L'Enfant Plaza.  
25 Lunch is your own, so we will try, we let Victoria as

1 the, as we do our presentations and get through the  
2 day, we will decide, we will choose a point for, a good  
3 point for lunch.

4 We would like to reduce interruptions if  
5 everybody would wait to speak, to be recognized by  
6 Victoria. Please remember, this is important for the  
7 court reporter, to speak into the microphone, give your  
8 name and your company for each time that you speak.  
9 Please keep side conversations to a minimum. If you  
10 can, if possible, you can go outside if it becomes a  
11 lengthy discussion.

12 It may be necessary to cut off topics to  
13 maintain schedule. We have a very full agenda today.  
14 And we have a number of topics that people want to  
15 discuss. So, when we get into that we want, we have  
16 set a list up here, some of the topics that we  
17 received. What we would like to do is see when we get  
18 into that, to prioritize that or if everybody feels  
19 that all the agenda items or the topics are necessary,  
20 we can add that when we go to the agenda review.

21 This workshop is scheduled to end at 4:00  
22 p.m. today or soon if we get through everything.

23 Topics that have not been fully discussed can  
24 be addressed in additional comments. The comment  
25 period for this workshop and the notice is February 2

1 of 1999. So that will coincide with the supplemental  
2 rulemaking comments. All comments and data submitted  
3 to the Department will be used for the publication of  
4 the Notice of Proposed Rulemaking.

5 Written comments and data submitted will be  
6 available for the public inspection at the reading  
7 room. If anybody needs the phone number it is (202)  
8 586-6020, and again, it is down the hall in 1E-190.  
9 Written comments should be addressed to the Department  
10 of Energy in the Federal Register notice that are  
11 addressed in the notice, supplemental advance Notice of  
12 the Proposed Rulemaking.

13 We request that 10 copies be submitted of  
14 comments or data. The Department would like if  
15 possible, electronic copies in WordPerfect 6.1. Please  
16 no fax copies. There is something new that we are  
17 accepting, is we will accept electronic copies of  
18 E-mails. We ask that you follow up with a signed hard  
19 copy, so that we have a permanent record and we know  
20 that is your official comment. And that should be  
21 addressed also, there is an E-mail address. You can  
22 address that to myself, send it to the Department and  
23 the addresses are given in the Notice of Proposed, of  
24 the supplemental advance Notice of Proposed Rulemaking.

25 Any person submitting information they feel



1 is confidential, and exempt by law from public  
2 disclosure, should submit one copy with the information  
3 in it, and 10 copies in which the information claimed  
4 confidential is deleted. In accordance with the  
5 procedures in 10 CFR 1004.11, the Department shall make  
6 its own determination whether the information shall be  
7 exempt from public disclosure. Okay.

8 And keeping with the regulations of this  
9 building, there is no smoking allowed in the building,  
10 in the restrooms or down the hall, either end of the  
11 hall to the right or left. There are public phones in  
12 the main lobby area.

13 And again, we appreciate everybody taking the  
14 time and effort in preparing for this meeting and for  
15 this workshop. And we will be glad, glad to receive  
16 comments and opinions. And we have done, we have  
17 already done introductions. And if we would just go  
18 right into agenda review. Victoria?

19 MS. NADER: Thank you, Bryan.

20 First let me say thank you to all of you for  
21 being here. I reviewed the record of your last  
22 meeting, and I can see that you have come a tremendous  
23 distance from the place we all started over two and a  
24 half years ago. I am impressed by the technical  
25 expertise you have brought. And I am impressed by your

1 ability to work together as a team. And I am aware  
2 that we have a tremendous amount of work to do today,  
3 but I see that you are well organized and you know the  
4 routine. And I will look to you to manage yourselves  
5 to a certain extent.

6 Just to reenforce the ground rules. Because  
7 we have to have a record of this proceeding, please  
8 speak only one person at a time. We need to have the  
9 recorder be able to hear you. And Recorder, please  
10 signal if there is someone you can't hear, please let  
11 us know.

12 If you need to have a side conversation with  
13 someone, please go out in the hall to do that. It is  
14 the only way we can continue to hear one another  
15 inside. Please respect yourselves as colleagues.  
16 State your name and your organization each time you  
17 speak. This is very important. Be concise. There is  
18 a tremendous level of detail involved in some of the  
19 work we are doing. We have to use words sparingly and  
20 effectively in order for us to accomplish what we need  
21 to accomplish today.

22 And again, speak to be heard. Make sure that  
23 you are projecting your voice so that the recorder and  
24 everyone in the room can hear you.

25 The agenda for today is lengthy. Does

1 everyone have a copy of the agenda? We will spend from  
2 9:30 to 11:30 going over the items that you have said  
3 you want to provide information on and the areas that  
4 you have indicated you have questions on. And in just  
5 moment or two, I will go through the list and get an  
6 indication of how many people are interested in which  
7 topics, so that we can be as efficient as possible.

8 We will work until 11:30 on those questions  
9 and answers. At 11:30 we will review the results of  
10 the Reverse Engineering, Phase II. Approximately 12  
11 and we will look for a convenient breaking point, but  
12 approximately 12 to 1 will be lunch time. As Bryan  
13 said, you are on your own for lunch.

14 Then beginning at one, we will have a series  
15 of presentations, covering Marginal Energy and Water  
16 Rates, National Energy Savings, approaches to determine  
17 shipment and elasticity. Consumer Survey, update. We  
18 will have a break roughly in the middle of our  
19 afternoon time. And following the break, we will cover  
20 Manufacturer Impact Analysis, Indirect Employment,  
21 Environmental Assessment, Utility Impact Analysis. And  
22 then at four to four-thirty, we will have a summary  
23 discussion and try to cover anything that we have not  
24 touched on earlier in the process.

25 Okay. Is everyone clear on what we are

1       doing?

2               MR. BERRINGER: Is there anything that we have  
3       eliminated from the agenda that you feel needs to be  
4       addressed? Earl, you have a question?

5               MR. JONES: -- not elimination, I want to  
6       check them again.

7               MR. BERRINGER: Please speak in the  
8       microphone, and identify yourself, please.

9               MR. JONES: Yes, Earl Jones with G.E.  
10       There was, I thought a provision made for  
11       call ins on the consumer survey piece of the consumer  
12       discussion, is that still true and how is that working  
13       on this agenda?

14              MR. BERRINGER: That is correct. I didn't put  
15       that on the agenda since that was a working group  
16       meeting. That is at 4:30 this afternoon and I do have  
17       the call in number for the working group.

18              MR. JONES: I thought it was initially set at,  
19       wasn't it set at two or not? No?

20              MR. BERRINGER: No, 4:30 this afternoon, which  
21       is going to be in the room right across the hall, which  
22       is 1E-250. So, as soon as we break up here, if we  
23       break up earlier, we can do that. I can give, if  
24       during the day you need to call somebody, the call in  
25       number is (202) 287-1380. So, we will make that

1 available later this afternoon. But, that is starting  
2 at 4:30, following this meeting.

3 MS. NADER: Anyone else have a question?

4 Okay. Qonnie has posted on the easel charts  
5 the primary topics that people have said they want to  
6 talk about today. What I would like for you to do,  
7 please, is raise your hand if you are interested in  
8 these particular topics. I want to get a sense of  
9 whether we will be talking about items of general  
10 interest to the whole group of people. And that will  
11 make a determination also as to whether there might be  
12 some issues that could be handled one on one or  
13 otherwise in a smaller setting.

14 Okay. How many people are here to talk  
15 about product class?

16 MR. BERRINGER: We were talking about, the  
17 issue here that we were looking at and we can elaborate  
18 that on, is the compact class. There was a comment  
19 from Whirlpool about increasing that product class.  
20 So, that was the main topic that we heard as far as  
21 product class.

22 Earl, did you have something else to add to  
23 that?

24 MR. JONES: Oh, you are so generous, Bryan.

25 MS. NADER: I didn't hear that, Earl. What

1 did you say?

2 MR. JONES: I am complimenting Bryan on his  
3 generosity. Well, of course, a more basic question  
4 then that is in product classes that have been  
5 historically recognized whether they will continue as  
6 they relate to port of access.

7 MS. NADER: Okay. Yes, sir?

8 MR. MARTIN: I am Michael Martin, California  
9 Energy Commission. I am a little confused by your  
10 question. You asked whether we want to talk about it  
11 or whether we are interested in it. There are a lot of  
12 things I am very interested in, but I don't wish to  
13 make a statement, but should I raise my hand?

14 MS. NADER: Thank you for that --

15 MR. MARTIN: I certainly wouldn't want to miss  
16 a word that Earl told me.

17 MS. NADER: The purpose of asking you to give  
18 me a signal of your, it is a signal of interest, not  
19 just something you want to talk about. Thank you. The  
20 whole purpose here is just to make sure that we are  
21 spending our time on the things that people think are  
22 most important. Okay.

23 Water and sewer rates? All right. That one  
24 is popular.

25 Elasticities? Is there even one person in

1 the room who wants to talk about elasticities? Okay.

2 MR. BERRINGER: These, the topics, too, that  
3 we have the asterisks, we will be presenting some this  
4 afternoon, especially water rates and we will be  
5 talking about elasticities, the next topic shipments is  
6 also on the agenda for this afternoon.

7 MS. NADER: How many are interested in the  
8 topic of shipments? Thank you.

9 Repair and warranty costs? Life cycle costs?  
10 Okay. Thank you.

11 Life of the appliance in life cycle costs?  
12 Thank you.

13 Energy, annual energy outlook '99 forecast  
14 and analysis? Okay.

15 What else do we need to talk about today?  
16 What are the items that are not yet on the list?

17 Yes, sir?

18 MR. SCHEEDE: Glen Scheede. I would just like  
19 to ask Bryan, you asked for comments by December 4th  
20 for items that did not appear to be on the agenda, to  
21 send the comments in to nominate things. And I duly  
22 sent you a number of them and I notice you don't even  
23 bother putting them on the list. Is there some  
24 criteria that you have for selecting things that you  
25 will or will not consider?

1           MR. BERRINGER: If you look at the agenda, we  
2       tried to address some of those in the other comments,  
3       about midway down, when we talked about the scenarios.  
4       So, we sort of put those, when we get into discussion,  
5       we put save detergent, additional information. We just  
6       put a handful of them on here. So, if you have  
7       something you strongly feel that is missing from this  
8       list.

9           MR. SCHEEDE: I can give you another copy of  
10      my December 4th letter. One topic is the general issue  
11      of quality of data, because we have, we are now getting  
12      data from a number of sources, apparently the DOE and  
13      its contractors are using with no information to show  
14      the representativeness, validity or reliability of the  
15      data. We merely are presented results without that  
16      kind of discipline with it. I think that is a general  
17      topic.

18           MS. NADER: Okay. Thank you.

19           MR. SCHEEDE: A general topic that needs to be  
20      considered by DOE.

21           I do have comments on the MAISY data, but  
22      apparently that will be on the agenda.

23           MS. NADER: Say that last item, please, I  
24      couldn't hear you?

25           MR. SCHEEDE: MAISY, M-A-I-S-Y. The new



1 source of commercial data that DOE proposes to use for  
2 all sorts of decisions.

3 MS. NADER: Okay. Thank you.

4 MR. SCHEEDE: That apparently is on the  
5 agenda. You do seem to have, I guess the marginal  
6 costs and taking out the fixed portion of bills is,  
7 will be discussed this afternoon and life of  
8 appliances. So, the main one is this quality of data,  
9 which seems to be missing. Thank you.

10 MS. NADER: Thank you.

11 How many people are interested the quality of  
12 data issue? Okay. Thank you, that was a good  
13 addition.

14 Any other additions? Yes?

15 MR. NADEL: I am not quite sure where they fit  
16 in, whether it is here or this afternoon, but three  
17 other things, I wasn't clear whether they are on the  
18 list.

19 One is a question of retail mark-ups.

20 MR. BERRINGER: Yeah, I think we have skipped  
21 this page right here. We do have alternative, this is  
22 sort of what is in the agenda, alternative scenarios.

23 MR. NADEL: I just wanted raise, if you have  
24 got it covered, great.

25 MS. NADER: Thank you.

1           MR. BERRINGER: I think these some of your  
2 savings from detergents, information. You had talked  
3 about the cost 40 to 45 percent.

4           MR. NADEL: Right.

5           MR. BERRINGER: And retail mark-ups. So, we  
6 did.

7           MR. NADEL: Okay.

8           MS. NADER: Thank you.

9           MR. SCHEEDE: I am sorry, Glenn Scheede again.  
10 Another issue that I should have mentioned is access to  
11 data. This is a problem particularly with MAISY  
12 because apparently it is high cost, anywhere from 20 to  
13 50,000 dollars to get at it. And the question of how  
14 that information will be made available so it can be  
15 evaluated by people interested in participating in this  
16 process.

17           MS. NADER: Good, thank you. Others? Yes,  
18 sir?

19           MR. GREGG: Tony Gregg, City of Austin. Just  
20 one thing for the input for the model. I don't know if  
21 it is addressed anywhere, but the reduction in cost to  
22 utilities and electric, all types of utilities and not  
23 having to fund rebate programs after standards are  
24 implemented. I don't know if that is already taken  
25 care of or not.

1                   MR. BERRINGER: No, I don't think that was  
2 something that we have.

3                   MS. NADER: You said reduction of what, I  
4 couldn't hear you clearly?

5                   MR. GREGG: Reduction in cost for rebate  
6 programs that are currently in effect, to try to  
7 promote efficient technology.

8                   MS. NADER: Thank you.

9                   Okay. Anything else? All right. Hearing no  
10 additional suggestions, let's begin the conversation on  
11 Product Class.

12                   May I ask those who have table tents, a  
13 favor, if would help me a great deal if you could turn  
14 your tents so that I can see your organizations. Thank  
15 you. That is useful.

16                   MR. BERRINGER: If I could, I just had one,  
17 the presentations are there. We probably, in order to  
18 save time, we probably didn't, but one of the things  
19 that was on the agenda was the, as far as the overview  
20 of the schedule. And I would just to like to go  
21 through that briefly before we start getting into the  
22 topics. I just want to put this slide, this is the  
23 fourth workshop that we have had as far as the  
24 analysis, so it has been over the approximately two  
25 years since we had our first kickoff workshop, in the

1 process. Just so everybody is on the same schedule  
2 here. We are, basically today we are having our  
3 workshop. Oh, I am sorry, sorry.

4 MS. NADER: Excuse me, I am having equipment  
5 trouble here.

6 (Pause.)

7 MR. BERRINGER: Public workshop today to  
8 address the comments received on the ANOPR. We  
9 receive, we are looking to receive comments February  
10 2nd of 1999, again, pertaining to this workshop and the  
11 comments to the Supplemental Advance Notice.

12 We are looking at, if everything goes  
13 appropriately and Mike Rivest will talk about  
14 manufacturing impact later this afternoon, starting,  
15 start some preliminary work in February time frame.  
16 That will coincide with some of the consumer survey  
17 information that will be discussed also today.

18 We are looking, in November of '99,  
19 publishing the Notice of Proposed Rulemaking and then  
20 holding a public hearing in December of '99 and publish  
21 the final rule, we are looking at September of 2000.

22 And I have already introduced some of the, I  
23 am team leader, Qonnie Laughlin is also on the team,  
24 Gene Margolis, we also have. A. D. Little is a lead on  
25 engineering and manufacturing. Reverse engineering and

1 LB&L is lead on the LCC, and National Benefits  
2 Analysis, which we will be going over this afternoon.  
3 And we have ENRIL/Quantum, which is doing our consumer  
4 research for us.

5 And as, to the slides we have already gone  
6 through, the slides we have, and address the comments  
7 pertaining to the Supplemental Notice.

8 So, I think we have can go and get into  
9 discuss as far as the topics and I guess the first one  
10 we would start off would be product class.

11 One of the, as addressed, one of the comments  
12 to the Advance Notice, the Supplemental Advance Notice  
13 of Proposed Rulemaking, Dan Oprah was the product class  
14 and changing the product class to two cubic feet for  
15 the compact. Is there, does anybody have any further  
16 discussion on the product class on the compact,  
17 pertaining to the compact? Yes?

18 MR. NEAL: All right. My name is Chad Neal  
19 from Staber Industries. We have a concern about  
20 raising the upper limit of 2.0 cubic feet. We have a  
21 unique top load and tumbler action washer that is 1.93  
22 cubic feet. And --

23 MS. NADER: May I ask you to speak a little  
24 louder, please?

25 MR. NEAL: Yes, we hold, excuse me, we hold

1 the same amount at least or more than a regular washer  
2 at our tub capacity because of its unique top load and  
3 tumbler action design. We are just concerned about it  
4 being raised to 2.0 and putting us into the compact  
5 class, when we are actually a standard washer. So, it  
6 is just the issue of that upper limit of the tub  
7 capacity.

8 MR. BERRINGER: Does anybody else have  
9 comments pertaining to compact class as far as either  
10 opposed or for or against changing the product class?

11 MR. WEINGARTNER: Roland Weingartner, Miele  
12 Appliances. I just think that this compact class is  
13 subjective at the very least. And right now if you  
14 change that up to two, you are going to knock out many  
15 of the European washers, because of the horizontal  
16 loading, they are generally smaller drums, although  
17 they can do more laundry because you can fill them to  
18 the top, which you cannot do in a vertical axis. So, I  
19 think, if you make, if you force it up to two, you are  
20 going to force us to market a machine that for years  
21 has been marketed as a standard, because of the load  
22 size. Now you are going to force it to compact class  
23 for different marketing. And also with the average  
24 load, the average wash load being between seven and  
25 eight pounds, generally, there is really no need to

1 change the compact class up to two.

2 MR. BERRINGER: Alan?

3 MR. KESSLER: Bryan, we are not opposed to the  
4 increase in size of the compact washers up to two.  
5 However, we think that the Department ought to also  
6 look at maybe creating a super capacity or a larger  
7 capacity above the standard size, starting say at 2.9  
8 to 3.2 to create differentiation, because there is a  
9 lot of confusion in the marketplace presently on what  
10 size washers really are, when you get into the larger  
11 sizes.

12 We want to also make sure that we maintain  
13 the differentiation between what we characterize as  
14 vertical axis and horizontal axis machines as opposed  
15 to top loading versus front loading. There is distinct  
16 technological differences between the machines  
17 regardless of where they are loaded.

18 MR. BERRINGER: Okay. Thank you.

19 MS. NADER: Yes?

20 MR. STEVENS: Charlie Stevens, Oregon Energy  
21 Office.

22 Could I get somebody here in the room to  
23 explain to everybody else, at least to me, what the  
24 rationale for the change is?

25 MR. BERRINGER: We had basically a comment, it

1 was from Whirlpool, it is dealing with the capacity  
2 that it may eliminate a product class, if maybe, with a  
3 particular, or a particular group, it may be a niche  
4 produce or a small product by, with the test procedures  
5 not being able to, my understanding, to reach the  
6 minimum efficiency standards, when it is categorized at  
7 a low. And maybe Dick Best from Whirlpool may be able  
8 to elaborate on the issue.

9 MR. BEST: Is this on?

10 MR. BERRINGER: Yes.

11 MR. BEST: Yes, just a comment on the  
12 rationale behind this. Traditionally the compact class  
13 in the last rulemakings was set at 1.6 cubic feet. And  
14 the definition was really based on what the industry  
15 was producing during that, during those periods of  
16 time. And there were multiple manufacturers of what  
17 was termed compact washers. But, since that time, the  
18 market has changed and not all producers remained in  
19 that niche market. And at the same time, Whirlpool  
20 became a supplier, even to some of the other industry  
21 members of these products, and it just was not  
22 economically feasible to continue with the style of  
23 compact. At that time it was replaced with one that is  
24 slightly larger, the two cubic feet model. And that,  
25 and we do supply that to other members in the industry



1       today as well. So, it is, we are mostly a sole source  
2       on it. There are still small number of the 1.6 cubic  
3       feet models built, but they are built into, again,  
4       unique products such as washer/dryer combination units.  
5       And this whole total market, if you threw all of them  
6       together of these vertical axis, what is basically  
7       compacts, is about one percent of the total market.

8               But, even today, those two cubic foot are  
9       classified as full size washing machines, but if they  
10      went to a higher efficiency standard, the practicality  
11      of converting that small product line and adding costs  
12      would basically eliminate that out of the market and  
13      take that away from consumers. And they do have unique  
14      utility as we have pointed out in many of our comments,  
15      many of them are used as portables. Some come with  
16      casters. They are a low in product for speciality  
17      purposes. And that was the whole rationale.

18             The fact that there are also H Axis machines  
19      that would fall in that category, I think we recognize  
20      that that might be an issue from the marketing side but  
21      there are probably other solutions to that. The term  
22      compact, as it is used today, maybe that needs to be  
23      considered, if that is the right term. But, certainly  
24      the utility issues are there.

25             MS. NADER: Does that answer the question?

1 Good.

2 Yes?

3 MR. NEAL: May I make a comment? Brian  
4 Neal, just a consumer. Why can't we just put them all  
5 in one class and look at the efficiencies ourselves and  
6 not have different classes?

7 MR. BERRINGER: That is the next step, I  
8 think, that Earl brought up as far as port of access.  
9 That is one of the comments that we received in the  
10 notice, is to have single class. So, maybe at this  
11 point, we can, we had a number of comments talking  
12 about that.

13 MR. JONES: Well, I am not sure I understood  
14 what the gentleman's comment was, whether he was  
15 addressing the issue of port of access as it relates to  
16 standard machines or whether he was addressing the  
17 compact or the increase of the size of the compact.  
18 So, maybe he can clarify that and maybe --

19 MR. BERRINGER: I am sorry, could you clarify,  
20 sir? Were you referring mainly to only to the compact  
21 versus the standard or are you saying --

22 MR. NEAL: No, what I am saying is as a  
23 consumer if I want to compare machines, why should I  
24 have to look at different lists, put all the machines  
25 down, if I want to wash clothes, see what the

1 efficiencies are, whether it is horizontal, vertical,  
2 whether it is 1.6 or 2, just let me see and make my own  
3 decision.

4 MR. BERRINGER: So, you are saying one class  
5 regardless of size or port of access, just one standard  
6 class, just close washers generically.

7 MR. NEAL: Yes.

8 MS. NADER: Yes?

9 MR. NADEL: Just getting back to the previous  
10 issues.

11 MR. BERRINGER: This is Steve Nadel?

12 MR. NADEL: Steve Nadel, of ACEEE, of the  
13 compact class. I was just curious if the people from  
14 Whirlpool, Staber and Miele, could maybe comment, is  
15 there some value between 1.6 and 2.0. That might work  
16 for everyone. I mean, I don't know, I heard Staber  
17 there, theirs is 1.93. So, I would guess a 1.9  
18 distinction would work. I don't know whether that  
19 would work for Whirlpool, likewise Miele. Is there  
20 some in-between value?

21 MR. MARSOLLEK: This is Michael Marsollek with  
22 Bosch Group.

23 First, a comment on your remark there, for  
24 us, 1.9 would not work. But, I also wanted to comment  
25 on that it is, I think it is dangerous to just work

1 cubic feet load sizes. Also for the comment that Mr.  
2 Weingartner from Miele before, that the capacity of  
3 horizontal axis machine in terms of load size, is quite  
4 different when you put that in relation to the actual  
5 cubic feet of the size of the drum, drum, because like  
6 a 1, I just grab a number 2.0 cubic feet, horizontal  
7 axis washer, can hold probably the same amount of  
8 laundry and again, I am just taking a number here, as a  
9 3.2 cubic feet top loader or even more laundry. So,  
10 from the consumer side, I think it is much more  
11 interesting to look at the actual load capacity. How  
12 much laundry actually can be washed, reasonably washed  
13 in that machine as opposed to just measuring the  
14 physical size of a tub, not taking into consideration  
15 the actual way the machine works. Thank you.

16 MS. NADER: Thank you.

17 The gentleman at the mike.

18 MR. WEINGARTNER: Roland Weingartner, Miele  
19 Appliances. I think we may be mixing a little bit  
20 apples and oranges, too. We are speaking about here  
21 selling from a marketing point. All of our machines  
22 even though they are under two, I would say more than  
23 95 percent of them already reach or exceed the limits  
24 for standard machines, even though they are compacts,  
25 horizontal axis, I am speaking about.

1                   But, what I see happening and perhaps Bosch  
2                   and Staber is, we have somebody come in and out, since  
3                   we are a compact, they market their machine as the most  
4                   efficient standard size machine, when in reality our  
5                   compacts are more efficient than their standard  
6                   machines. So, we are mixing two different issues here,  
7                   trying to make one answer out of them. So, you have  
8                   got to separate, are we talking about pure energy or  
9                   are we talking about marketing also?

10                  MS. NADER: Thank you. Yes?

11                  MR. NEAL: Chad Neal from Staber Industries.  
12                  I think the thing that we have to consider here is  
13                  usable tub volume, because everybody throws out a  
14                  number like 3.4 cubic feet and 2.0 cubic feet, but  
15                  there is a difference in cubic feet of the entire tub  
16                  and then usable tub volume. That is the thing that  
17                  needs to be considered. Maybe you take the entire tub  
18                  capacity and subtract out the volume of water and the  
19                  volume of the agitator and then you will come up with a  
20                  number that is more accurate, not totally accurate, but  
21                  more accurate than just a tub volume.

22                  MS. NADER: Thank you. Anyone else on this  
23                  topic?

24                  MR. BEST: One more comment from the Whirlpool  
25                  Corporation.

1 MS. NADER: Say your name, please.

2 MR. BEST: Richard Best, Whirlpool  
3 Corporation.

4 MS. NADER: Thank you.

5 MR. BEST: Our comments and all this really  
6 are not intended to address the marketing issues as  
7 brought up here. I think the whole intent is that  
8 there is a small vertical axis low end product line  
9 that serves a speciality market here in North America.  
10 And that to put a high efficiency or high investment  
11 challenge to this product, would basically eliminate it  
12 from the market. Which as part of the rulemaking says  
13 this is not the intent of the rulemaking is to  
14 eliminate unique utility out of the market.

15 I agree there are probably some issues  
16 related to the size and where people fall and how they  
17 might label their products. And even in the capacity  
18 measurements as to how you might measure. But, I think  
19 we stand on our comments that 2.0 is the request. It  
20 is based on the product as it exists today. And the  
21 same logic goes along if you are going to make it 1.7  
22 or 1.8, you have to retool the product for a small  
23 niche market, it is probably going to disappear. So, I  
24 think our comments are, maybe there needs to be some  
25 further discussion outside of this meeting as to

1 possible solutions to this conflicting issue here. And  
2 it is a mixed issue, but I think our 2.0 is the number  
3 that we would support.

4 MS. NADER: Thank you. Sir, sir?

5 MR. NEAL: Tom Neal, with Staber  
6 Industries.

7 As a user of a washing machine, you ask a  
8 housewife to use the washing machine or even, I use  
9 one, too, don't usually think of doing two cubic feet  
10 of laundry or 12 pounds of laundry. I usually think of  
11 doing my laundry in loads. I did two loads today or  
12 three loads. And if you look at the statistics on  
13 loads, the loads are down around seven pounds. Our  
14 small machine at Staber's, relatively small machine,  
15 will do the full range of loads that were mentioned in  
16 the Burns Study. And it comfortably does the standard  
17 load that the average housewife that is doing laundry  
18 uses. And I think maybe we should be thinking in terms  
19 of loads of laundry, standard load of laundry rather  
20 than the cubic feet or the pounds.

21 MS. NADER: Thank you. Anyone else?

22 Fine. And staff, do you have what you need  
23 on the -- Oh, I see one more.

24 MR. JONES: On what? Do you have what you  
25 need on what?

1 MS. NADER: On the topic of product class.

2 MR. JONES: No, I thought we were just  
3 exhausting the issue of size of compact versus  
4 standard.

5 MS. NADER: Size. All right. Thank you.

6 MR. JONES: There are still other issues to be  
7 addressed.

8 MR. BERRINGER: Okay.

9 MS. NADER: Thank you.

10 MR. STEVENS: Charlie Stevens, Oregon Energy  
11 Office.

12 Has the Department ever considered in the  
13 past setting the standard for these products like they  
14 set it for refrigerators? With a formula that adjusts  
15 the maximum allowability use to, in this case the  
16 volume?

17 MR. BERRINGER: I guess we have not considered  
18 that. I guess that maybe a possibility. I am not sure  
19 what the likelihood of that is.

20 MR. STEVENS: It is one, I mean, it seems to  
21 me that Whirlpool is not just sort of suggseting that a  
22 second class needs to be established at a certain  
23 benchmark, but that a separate standard would  
24 ultimately have to, I mean, the goal there is to set a  
25 separate standard for that class. And from the sound



1 of it, it would have to be a lower efficiency standard  
2 to accommodate the product that is made today without  
3 substantial changes. And sometimes a sliding scale can  
4 work to accommodate that sort of thing. I don't know,  
5 I have never tried to do it, so I don't how  
6 successfully you could be. But, I might suggest that  
7 the Department give that some thought if there is some  
8 tendency toward a single class.

9 MR. BERRINGER: Okay. Thank you.

10 MS. NADER: Thank you.

11 MR. JONES: Earl Jones here, G.E.

12 Actually this discussion that we have just  
13 had is a very good lead in to the whole, to the other  
14 part of the product class discussion. And that, of  
15 course, is the more basic one of whether or not the  
16 Department is heading in the right direction in its  
17 proposal or its suggestion, whatever you want to  
18 characterize it as. To eliminate any product class  
19 based on the access of rotation. And of course, we at  
20 G.E. believe that that would be a mistake. And this  
21 continues to be an issue that requires a great deal  
22 more analysis than the Department has done up to this  
23 point in time. It is a little like the cart before the  
24 horse, focusing first on the question of consumer  
25 utility, we have got, you have got a workshop scheduled

1       for later today, get, even though you haven't pulled  
2       that data together yet, even though the record is quite  
3       conflicted on this question, you have made quite clear  
4       your intention to proceed. That I think is going to be  
5       a significant roadblock to progress in this rulemaking.  
6       And I think you need to recognize that fact. And let's  
7       just prepare for it.

8               The discussion we just had, as I said, is a  
9       good predicate for this discussion, because here we  
10      are, now with the last discussion from Oregon  
11      suggesting that a lower efficiency might be appropriate  
12      for an upside compact washer. When based on the  
13      comment we just heard from the people who build those  
14      machines, those are apparently more efficient than  
15      other machines. If the Department is promoting  
16      efficiency, what exactly is your goal? It seems to me  
17      that that the whole question of how you determine these  
18      product classes needs to focus on what guidance is  
19      being provided to consumers. The gentleman's question  
20      back there, I think was an interesting one. Because  
21      there is substantial potential for deception of  
22      consumers an actual value they are receiving. And  
23      performance, both in terms of the energy efficiency,  
24      and operating costs if these classes are merged.

25             You want to promote efficiency? I say do it

1       in a rational way that preserves the ability of  
2       consumers to make an appropriate choice and also  
3       preserves their ability to access utilities and  
4       functionalilties that they have determined in the  
5       market to be critical. Not as the basis of some  
6       rulemaking, not on the basis of some people sitting in  
7       a room somewhere, you know, defining what the answer  
8       should be. But, based upon what the market has  
9       commanded. It is rational, at least in this respect,  
10      that people buy products they want. And for this  
11      process to lead to one which takes products away from  
12      them, makes it is invalid. And also, opens it up to  
13      challenge.

14               So, let's just understand that this still, it  
15      is a substantial issue. It requires a lot more data  
16      than is in the record. We look forward to working with  
17      the Department on that and meet with the rest of the  
18      parties at this table. But, it is still a substantial  
19      question that needs to be resolved.

20               MR. BERRINGER: Thank you.

21               MS. NADER: Thank you. Sounds like G.E. has  
22      additional data to offer and I know they will  
23      appreciate it.

24               MR. BERRINGER: Okay. At that, should we  
25      move onto the next topic? Does that pretty much

1 address the product class?

2 Phil Manthei?

3 MR. MANTHEI: Phil Manthei, from the Lyons  
4 Laundry.

5 Regarding the issue on front loading, top  
6 loading, is the Department going to go out and ask  
7 consumers their preference?

8 MR. BERRINGER: That is part of the  
9 information we are looking at. The utility issue that  
10 we are looking to get out of the consumer survey. And  
11 that is also, again, we can discuss further in the  
12 working group, what we, we have not, we are just in the  
13 first stages, the first phases of putting together the  
14 consumer analysis, consumer focus groups and so forth.

15 MS. NADER: Okay. Are we ready to move on?  
16 Water and sewer rates.

17 MR. BERRINGER: Again, this is going to be  
18 presented later, so there maybe even further discussion  
19 on the sewer and water rates. I think the topic on the  
20 agenda was talking about the, talking specific about  
21 historical trends and information there and may  
22 elaborate.

23 We can talk about that later this afternoon  
24 and get into more detail. Does anybody have specific  
25 comments on this as far as the data that was collected?

1                   MR. SCHEEDE: Glenn Scheede. Just at  
2                   question, how are you going to get into the issues this  
3                   afternoon of how the data were recollected, in detail,  
4                   so that we can tell whether the data are  
5                   representative, valid and reliable. Will those data,  
6                   will those issues be addressed in detail this  
7                   afternoon? If they will, fine.

8                   MR. BERRINGER: Yes, they will.

9                   MS. NADER: Thank you. Other questions?

10                  MR. MARTIN: Michael Martin. I would rather  
11                  wait until this afternoon when we have this background  
12                  to discuss these matters.

13                  MR. BERRINGER: Okay. That will be fine.

14                  There was very little interest on  
15                  elasticities, I know. That is something else that we  
16                  are trying to again take out of the consumer survey  
17                  information. We are trying to get some elasticity  
18                  values. So, again that will be. Is there, does  
19                  anybody else have a specific comment on the  
20                  elasticities, cost elasticities?

21                  Okay, again, we will get into that a little  
22                  bit this afternoon.

23                  Shipments, I know there was a lot of interest  
24                  as far as the topic of shipments. And I know that is  
25                  a, you know, from the standpoint of the analysis, the

1 Department is looking to try to get some more  
2 information on shipments. Basically, have information  
3 on the EF, with the new standards in place, there is  
4 very little information on MES. So, that is something  
5 that the Department has proposed. If there is  
6 additional data that can be given to us on that  
7 particular topic, so we can do a more thorough  
8 analysis. Is there --

9 MS. NADER: I saw a number of hands go up  
10 earlier. Were those questions or comments? Let's hear  
11 from you.

12 MR. JONES: Well, Earl Jones here again, G.E.  
13 When you say you are going to go into  
14 shipments, what exactly is encompassed in that, Bryan?  
15 I mean, this afternoon, is that what, will there be  
16 some presentation on that?

17 MR. BERRINGER: Yes, this afternoon Lawrence  
18 Berkeley Laboratory was going to talk about shipments.  
19 I think it is more or less the historical trends and  
20 projections, is that correct? I am looking for Jim?

21 MR. MCMAHON: That is right.

22 Earl, there is a handout in the package this  
23 morning, if you would like to get a preview.

24 (Pause.)

25 MR. JONES: So, do you, Jim, in this

1 presentation get into the issue of shipments by any  
2 particular configuration, product configuration or is  
3 this just gross shipments, in particular channels?

4 MR. MCMAHON: Gross shipments. This is not by  
5 configuration.

6 MR. JONES: Okay. So, Bryan, can we have  
7 some discussion then on the, I guess it would be the  
8 information that is set forth on page 48 of the ARPR,  
9 on the projected sales of horizontal axis washers  
10 through the year 2030. Whoever is the, whoever  
11 produced that data, can we have some explanation or  
12 discussion of that? And I guess my question is, is  
13 this a statement of aspiration or is it based on some  
14 data which says that this is the trend over X period of  
15 time and indeed we are projecting based on sales or  
16 what is it?

17 MR. BERRINGER: Are you talking specifically  
18 about the projections of the H Axis?

19 MR. JONES: Correct, in the middle paragraph  
20 on page 48.

21 MR. BERRINGER: Yes, I think the .5, is that  
22 what you are looking at, at the .5 percent?

23 MR. JONES: Yes.

24 MR. BERRINGER: Increase per year. I think  
25 that is just a, yeah, we are looking, if you have

1 specific comments on that, whether that is high, low.

2 MR. JONES: I have a specific question of  
3 where it came from.

4 MR. BERRINGER: Okay.

5 MR. JONES: And what role is it playing in  
6 this rulemaking? How is it entering into the  
7 Department's analysis of this rulemaking?

8 MR. MCMAHON: This is Jim McMahon from  
9 Lawrence Beckley National Lab.

10 Earl, that was an initial projection based  
11 upon discussions with a number of people involved in  
12 programs promoting horizontal axis machines. It was  
13 put out there as a strawman for comment. We would be  
14 happy to have further data about the current shares as  
15 well as expectations about further shares.

16 MR. JONES: So, I take it this was their  
17 aspirational goal and that indeed, there is no data to  
18 support this statement.

19 MR. MCMAHON: This was aspirational goal, I am  
20 not sure exactly how you would find that.

21 MR. JONES: Well, okay, then maybe, let me put  
22 it in English. I know it won't be possibly in  
23 statistical terms. What I mean is this is a goal they  
24 hope to achieve based on maybe their plans, but indeed  
25 that there is no data, which would say that current



1 sales would yield this kind of projection.

2 MR. MCMAHON: I think that is accurate. I  
3 have not yet received --

4 MR. JONES: Okay, thank you.

5 MR. MCMAHON: -- historical trend data about  
6 sales.

7 MR. JONES: So, then, Bryan, to get back to  
8 the question. So, where does this, how does this  
9 information play into this rulemaking? Are you saying  
10 that we have to challenge this or else it enters into  
11 the body of the rulemaking as an established fact?

12 MR. BERRINGER: Well, I think we did have the  
13 GRIM training session. It is taking into  
14 consideration, when you take the base case, when you  
15 are looking at, you know, what out there as far as the  
16 market. So, if you take that, this is being considered  
17 in the analysis. So, if there is conflicting data or  
18 if there is other suggestions, then --

19 MR. JONES: So, how then does the success of  
20 this product, which is, therefore, going to reduce the  
21 goal that the rulemaking, I assume, needs to achieve,  
22 how is that going to, how is that factoring into the  
23 analysis, then? Yet, you are presumably move for  
24 reduction in the stringency of the standards, isn't  
25 correct?

1                   MR. BERRINGER: I am not sure what you are  
2 asking as far as --

3                   MR. JONES: Well, if market is taking care of  
4 the problem, is my question.

5                   MR. BERRINGER: If it does, if it does, as  
6 projected?

7                   MR. JONES: Yes.

8                   MR. BERRINGER: Then again, it would be  
9 considered in the base -- I am sorry, go ahead,  
10 Michael.

11                   MR. RIVEST: Earl, I can --

12                   MS. NADER: Name, please.

13                   MR. RIVEST: Mike Rivest, from ADL.

14                   I can tell you how it is being used now. I  
15 can't really answer the measurement question. The way  
16 it is being used now is energy savings in the future  
17 are being benchmarked against this market penetration  
18 of H Axis. So, the higher the market, the forecasted  
19 market penetration of the H Axis, the lower the energy  
20 savings to the nation of a rule. So, when those energy  
21 savings are weighed against other factors, such as  
22 manufacturing impact, for example. The energy savings  
23 been less, there is less to weigh against. So, it does  
24 come into play in that sense.

25                   I am not sure that fully answers your

1 question.

2 MR. JONES: Yes, it does, thanks.

3 MR. RIVEST: Okay.

4 MS. NADER: Next? Yes, sir?

5 MR. GOLDSTEIN: Dave Goldestein, NRDC.

6 A follow up question, I think for Jim. As I  
7 was reading this section just now, it seemed to me that  
8 H Axis wasn't being used in a very rigorous sense. And  
9 what you really meant was high efficiency. And you  
10 weren't really trying to specify whether it was high  
11 efficiency, horizontal, vertical, diagonal or some new  
12 technology. Is that correct?

13 MR. MCMAHON: Jim McMahon from LBL.

14 That is correct. What is important is what is  
15 the distribution of efficiencies that will be sold in  
16 the base case, in the absence of standards? That is  
17 what we need to know.

18 MR. GOLDSTEIN: So, those percentages refer to  
19 high efficiency washers with a certain MEF.

20 MR. MCMAHON: That is correct.

21 MR. GOLDSTEIN: Thank you.

22 MS. NADER: Okay. Gentleman from Edison  
23 Electric.

24 MR. ROSENSTOCK: Steve Rosenstock, Edison  
25 Electric Institute.

1           Just as another, in the technical support  
2       document in Chapter 3, it talks about first quarter '98  
3       washer shipments by access.

4           MS. NADER: May I ask you to speak up a  
5       little, please?

6           MR. ROSENSTOCK: Steve Rosenstock, EEI.

7           In the technical support document dated  
8       October '98, in Chapter 3, Table 3.3, washer shipments  
9       by access, first quarter 1998, the source of that, is  
10      the revised draft report on consumer research for  
11      clothes washers, April '98. It said front  
12      load/horizontal had 5.4 percent market share. I guess  
13      that is a national figure. Oh, it says, okay, may not  
14      include all major retailers and therefore has a margin  
15      of error. But, that, just as at least one data, it is  
16      showing that in there, FYI.

17          MR. BIERMAYER: Peter Biermayer, LBNL.

18          That number is from a company called, a  
19      marketing company called Intellect. They surveyed, I  
20      believe, a large number, I don't know the exact figure,  
21      of retailers. I believe that doesn't include Circuit  
22      City or Sears.

23          MR. ROSENSTOCK: Steve Rosenstock.

24          As a follow-up, but was it a national as  
25      opposed to a regional survey?

1 MR. BIERMAYER: Yes, it was a national survey.

2 MR. ROSENSTOCK: Okay.

3 MS. NADER: At the mike?

4 MR. GREGG: Tony Gregg, City of Austin.

5 I have a comment more on the base case  
6 scenario. It seems like the base case is penalizing  
7 the efforts of those in the industry who are, outside  
8 of the industry actually, in the utility field, who are  
9 promoting the H Axis machines. It is not a given that  
10 utilities will promote H Axis machines indefinitely. I  
11 think most of us are hoping that there will be a  
12 standard earlier rather than later. So, we can invest  
13 our money in other things. So, if .5 percent is the,  
14 if it is a good number or bad number, whatever that  
15 number is, I think we should, there should be a  
16 reduction in that number based on the effectiveness of  
17 the rebate programs that are being promoted by  
18 utilities, so that the standard is not assuming that  
19 those programs will continue. Because I don't think  
20 they will continue indefinitely. The cost of them is  
21 high. And so, anyway, I think the forecasting has to  
22 recognize that and make some allowance for it. Thank  
23 you.

24 MS. NADER: Thank you.

25 MR. SCHEEDE: Glen Scheede, again.

1           Just a minute ago we had an example of using  
2           data that comes from some place, the organization has  
3           an impressive name, Intellect, but it tells us nothing  
4           about the quality of the data. I think DOE needs to  
5           start getting some discipline in this process. And if  
6           data are cited from some source, details of the manner  
7           in which that data were collected, whether it is really  
8           representative, are needed. Just saying it is a  
9           national survey, tells us absolutely nothing about the  
10          quality of the data. And that is a general problem.

11                 MS. NADER: Thank you.

12                 Yes, sir?

13                 MR. GOLDSTEIN: David Goldstein, NRDC.

14                 I think this is mischaracterizing the problem  
15          a little bit. There are no data concerning the future.  
16          There is data concerning the present or the past. And  
17          the future is projections which have different  
18          methodologies and different assumptions behind them.

19                 I think the broader point that is consistent  
20          with what Mr. Scheede said and a number of other  
21          comments, including the gentleman from Austin, is that  
22          we don't know what the base case. There is uncertainty  
23          in the base case and that uncertainty ought to be  
24          modeled explicitly because it has different  
25          consequences than any certain outcome. In other words,

1       if manufacturers know that the penetration of high  
2       efficiency washers is going to be 15 percent in the  
3       Year 2005, they can make investments based on that, and  
4       be sure of getting a return. If they know that it  
5       might be zero and it might be 100 or it might be  
6       anywhere in-between, there is a great possibility for  
7       stranded costs, or for not being able to meet consumer  
8       demands and having impacts in the other way. And those  
9       are manufacturer impacts of the base case, and they  
10      need to be analyzed.

11               MS. NADER: Thank you. Glenn?

12               MR. SCHEEDE: Glenn Scheede, again.

13               I thought the data we are talking about  
14      related to the first quarter of '98, and it was, in  
15      fact, historical data that LBNL was referring to. And  
16      if so, I think they have a responsibility, that DOE has  
17      a responsibility to explain in detail where that data  
18      came from. If, in fact, as the gentleman from NRDC  
19      said, it is a forecast, then let's find out what the  
20      methodology is for the forecast and provide that in  
21      detail. But, perhaps LBNL could explain something  
22      about the specific piece of data that was used.

23               MS. NADER: Thank you. Yes?

24               MR. NADEL: Steve Nadel, ACEEE.

25               I had another question, I guess is probably

1       for LBNL. In the model used, is that model basically  
2       set up so that it needs kind of a straight line  
3       projection or is it able to deal with differing  
4       projections? I mean, it has come out here that it is  
5       likely and I have heard similar data from other  
6       sources, the market share in 1998 is going to be  
7       greater than the three percent you assumed. On the  
8       other hand, I suspect that, you know, your long figure  
9       maybe reasonable. Can you deal with other shapes of  
10      the saturation curve?

11               MR. MCMAHON: Jim McMahon from LBNL.

12              The model is flexible. We can deal with any  
13      projection that you would like.

14              And with regards to Mr. Scheede's question,  
15      Intellect is a firm that does market research. I  
16      understand that they sell this information to a number  
17      of private entities. And in our search for whatever  
18      data we could find that is used by other people and  
19      viewed as credible by other entities in the industry,  
20      we use them as one source of information. We would be  
21      happy to give you more information about the company  
22      and about their methodologies.

23              MS. NADER: Thank you.

24              MR. BERRINGER: And if you have, anybody has  
25      any better information or additional information, you



1 know, we definitely would want to do that. We are  
2 doing, research for the best information that we can  
3 find, that is available.

4 MS. NADER: Thank you.

5 Anybody else on this subject?

6 Okay. We are over at alternative  
7 standards scenarios.

8 MR. BERRINGER: Are we ready to tackle that  
9 one now?

10 Obviously, we have, this is one of the major  
11 things as far as the rulemaking is concerned, as far as  
12 the scenarios. Again, these are the examples. These  
13 are in no way where the Department has said this is  
14 what we are going to do, this is a starting point for  
15 discussion. And to give an example, there has been  
16 discussions as far as a single phase standard in a  
17 short amount of time, you know, three years. Or a two  
18 phase, a stretch vertical in three years, followed by  
19 five years of a higher efficiency standard levels.

20 So, some of the preliminary analysis does,  
21 when going through it, justify some of this. Of  
22 course, we are not finished through the analysis. We  
23 still have, in NOPR study we still have to do our  
24 manufacturing impact, a number of other things. And we  
25 will rerun that, rerun the analysis also, based on new

1 information.

2 So, at this point does anybody have any  
3 concerns, recommendations or ideas as far as a  
4 proposal, as far as standard levels or efficiency  
5 levels for the clothes washers? I think we -- No. You  
6 are going to let the Department choose. Okay.

7 MS. NADER: Yes, David.

8 MR. GOLDSTEIN: David Goldstein, NRDC.

9 It is very hard for us as a stakeholder to  
10 make any recommendation on these alternatives, because  
11 we can't connect them to anything in the real world.  
12 That is there are number of products that currently are  
13 at the types of levels that I think you are considering  
14 in the ANOPR. And depending on what the actual MEFs of  
15 those models are, will influence our judgement and I  
16 presume the judgement of a lot of other stakeholders as  
17 to whether the levels make sense. So, it seems to me  
18 that a research that is extremely important, is to  
19 gather MEFs of existing product on the marketplace, at  
20 relatively high efficiencies and publish those, so that  
21 we can see what, how the existing products match up  
22 with potential standard levels. That allows everybody  
23 to make some estimate of how hard of a job is it to  
24 redesign to this level, and what would the impacts of  
25 doing it be.

1           MR. BERRINGER: Yes, the Department has done  
2           some MEF testing, but we didn't divulge specifically,  
3           it is in the TSD, the information, what particular  
4           models or manufacturers those represented. But, we did  
5           take top selling machines and test them and to get some  
6           MEF data.

7           MR. GOLDSTEIN: But, we can't comment  
8           intelligently on it until we share the data. I mean,  
9           this is not priority information. Anyone with enough  
10          money can go out and buy a model and test it, and they  
11          have the MEF, but it is kind of a silly and burdensome  
12          way to have each stakeholder that is interested do  
13          that, when you could have one answer, so the  
14          manufacturers could submit it themselves. I don't  
15          really, it doesn't concern me who is vouching for the  
16          accuracy, as long as it is some trusted source that  
17          says here is what the number is.

18          MR. BERRINGER: Terry?

19          MR. THIELE: Terry Thiele with Frigidaire.

20          I would like to ask the Department a  
21          question, which is what's the Department purpose is in  
22          proposing at this stage in the process these different  
23          final rule outcome scenarios? In other words, what are  
24          you attempting to achieve by throwing these out? Given  
25          the fact that we don't have the analysis done to

1       justify any particular combination at the moment.

2               MR. BERRINGER: Well, we have some preliminary  
3       analysis, as far as the LCC and the NES, as far as --  
4       And based on what information was submitted. Again,  
5       these are starting points for discussion. The  
6       information may change but we are trying to see if we  
7       can reach a level that is agreeable by all the  
8       stakeholders.

9               MR. THIELE: The observation I would make  
10      though, is that the ultimate outcome of the rulemaking,  
11      whether you have one phase or two phases, two different  
12      standards at different times, or simply a single  
13      standard, will in large part be dictated by your  
14      subgroup analysis. And that to make some sort of macro  
15      cut at this before you have undertaken that sort of  
16      subgroup analysis, may tend to distort the rulemaking  
17      process in a way that maybe you didn't intend. But,  
18      may not, may cause us to have to go back and redo a lot  
19      of work, because the doubles in the detail. And the  
20      earlier conversation on product classes, between  
21      compact and standard, I think is instructive in the  
22      consequences for subgroups of manufacturers of those  
23      macro decisions, are going to ultimately dictate where  
24      your economic feasibility comes out.

25              So, my thought to the Department might be if

1       you are looking for a strawman scenario, or a group of  
2       scenarios to sort of bound your discussion, it might be  
3       more useful to take a low, middle, high approach and  
4       throw out a set of scenarios that maybe less bounded by  
5       your current work to date, as much as giving sort of  
6       extreme examples of what might happen. So, that you  
7       can then differentiate among them from a philosophical  
8       standpoint. And then allow your subgroup analysis to  
9       fill in the detail later on. Because I am just afraid  
10      that you are almost prejudging this absence your  
11      subgroup analysis.

12               MS. NADER: Thank you. Other comments? Yes?

13               MR. MARTIN: Michael Martin, California Energy  
14      Commission.

15               I think I understand the situation about MEF  
16      but let me state what I think and you can correct me.

17               This is defined in a test method which is not  
18      yet being applied, but has been published and approved,  
19      is that correct?

20               MR. BERRINGER: That is correct. And the test  
21      procedure, looking that MEF, will not go into effect  
22      until new standards take place. So, there is  
23      information on the market as far as EF, but as far as  
24      MEF and particular models. There is no public  
25      information on that.

1                   MR. MARTIN: I see. Now, but DOE has done  
2                   some testing or paid for some testing.

3                   MR. BERRINGER: We have done a limited number  
4                   of tests.

5                   MR. MARTIN: On what basis are you not  
6                   identifying what the models that you have, that you  
7                   have tested? Is it a confidential thing that might be?

8                   MR. BERRINGER: At this point it is  
9                   confidential thing that we didn't want to divulge the  
10                  manufacturers. We were doing this more for background  
11                  information for ourselves to sort of get what David  
12                  Goldstein wants. The thing is, is we started to look  
13                  at it and we took hot selling models, that are on the  
14                  market. When do you stop testing the models? Do we  
15                  test every single model that is on the market, is the  
16                  other problem as far as trying to -- And there is an  
17                  issue as far as confidentiality for information. So,  
18                  but that could be something that could be resolved or  
19                  discussed.

20                  MR. MARTIN: I find it very, very difficult to  
21                  understand why testing a model on the market, using a  
22                  published test method, could in any way be  
23                  confidential. And I kind of wonder if I was to try  
24                  this on DOE, whether your attorneys would tell me that  
25                  couldn't be done.

1           The other question I would like to say, is if  
2       we, at the Energy Commission, were to have a survey as  
3       to what is available, and we do have a database. It  
4       has some columns input MEF in. And we were to get this  
5       information from you, would you insist that we didn't  
6       divulge it to anybody?

7           MR. BERRINGER: No, if you were making public  
8       information to that, I mean, at this point, we just  
9       felt --

10          MR. MARTIN: So, you could give it to us and  
11       we could publish it and get you out of this pickle  
12       then?

13          MR. BERRINGER: That would be something that  
14       we would have to discuss with General Counsel, if we  
15       would release that information.

16          MR. MARTIN: May I on the record, on behalf of  
17       the California Energy Commission, request that  
18       information from you in order that the database may be  
19       more useful to people?

20          MS. NADER: So noted.

21          MR. MARTIN: Thank you.

22          MS. NADER: Gentleman at the mike.

23          MR. POPE: Hi, Ted Pope with the Pacific Gas  
24       and Electric.

25               Just our position is we are anxious to see a

1 good aggressive standard that is economically  
2 justified, sooner than later. We have been spending  
3 money on this, in this area since 1991, '92, you know,  
4 and originally we had the expectation there would be a  
5 standard taking effect in probably about this year, I  
6 guess, maybe next year. And I guess our concern is  
7 that things continue to look as if they are going to be  
8 dragged out with these incremental steps. And so, not  
9 yet having been convinced that it is, is solid  
10 justification for going a two phase step, we are at  
11 this time interested in seeing an aggressive step  
12 taken, you know, right clean, whether it is 40 or 45 or  
13 50 percent. I agree with some of the speakers here,  
14 that I am not real clear yet what the answer is and we  
15 look forward to getting more data there.

16 MS. NADER: Thank you. Yes?

17 MR. ROSENSTOCK: Another general comment, I  
18 know we will get more specific this afternoon.

19 MS. NADER: Name, please.

20 MR. ROSENSTOCK: Steve Rosenstock, Edison  
21 Electric Institute.

22 Another general comment about the  
23 supplemental ANOPR is, as going through it and also  
24 going through the technical support document, when  
25 looking at, through this on the energy rates for both



1 electricity and natural gas. It appears that the full  
2 rate rather than the marginal or even fixed cost for  
3 not taking it out, out of the ranges. So, as a result  
4 the payback shown, as well as some of the life cycle  
5 cost analyses are on the optimistic side. And I will  
6 get more into that later. But, I am saying when you  
7 are doing it over again, I do think that where possible  
8 as approved by the industry advisory committee, that to  
9 use ideally, which is the last step, to get the  
10 marginal energy rates to be used, or in the interim,  
11 for the interim analysis, taking out the fixed cost at  
12 a minimum is really necessary to get the better ranges  
13 of values. And I will talk more about that this  
14 afternoon. But, since you were looking for general  
15 comments, I just wanted to throw that out there.

16 MS. NADER: Thank you.

17 MR. ROSENSTOCK: Thank you.

18 MR. BERRINGER: And as you know we are  
19 pursuing marginal energy rates. And that is part of  
20 the discussion this afternoon. And also in March, we  
21 also did present results for both the fixed, with or  
22 without fixed cost in that March workshop.

23 MR. ROSENSTOCK: But, but -- Steven  
24 Rosenstock, but in the ANOPR, in the Federal Register,  
25 you did not take out the fixed costs.

1 MR. BERRINGER: That is --

2 MR. ROSENSTOCK: So, that is why I wanted to  
3 raise that issue.

4 MR. BERRINGER: Thank you.

5 MS. NADER: Thank you.

6 Steve?

7 MR. NADEL: I wanted to ask DOE two questions  
8 and then I can get some opinions on this issue of  
9 general direction, or in particular exact numbers.

10 The first question, if I am understood  
11 correctly, Bryan, that you have done some testing of  
12 MEF of some units. You don't want to identify what  
13 test results go with what units. Can you at least say  
14 what test results you have gotten, Unit A, Unit B,  
15 ignoring what products they are.

16 MR. BERRINGER: That information should be in  
17 the TSD.

18 MR. NADEL: Okay.

19 MS. NADER: Thank you.

20 MR. NADEL: Okay. I will look for it in  
21 there.

22 MR. BERRINGER: It is available.

23 MS. NADER: Yes, sir, please step to the  
24 mike.

25 MR. MODTLAND: Dave Modtland, Frigidaire

1 Home Products.

2 The information that is presented in the TSD,  
3 on the MEF equations, it is difficult to tell since the  
4 models are not identified, but I guess to me that data  
5 looks suspect at this time. And as we have had some  
6 discussions in the past, with the facility that has  
7 presented information. They have, themselves,  
8 identified discrepancies in being able to repeatedly  
9 obtain MEF numbers for certain models. And so, there  
10 is, I have got some questions, some of those values  
11 that exist in the TSD, at least in my mind.

12 MR. BERRINGER: Okay. If I could just follow  
13 up on that. Just, there is some, we have seen some  
14 discrepancies, that information as far as the RMC, so  
15 it does make a difference in some of those results.  
16 And that is something we are further pursuing. So,  
17 there are some possible changes in the numbers that are  
18 presented in that, in the TSD.

19 MS. NADER: Yes, sir?

20 MR. NEAL: Tom Neal, Staber Industries, again.  
21 I don't think we would have any difficulty sharing the  
22 data on the MEFs or the EFs, but the problem that we  
23 see is that it is misleading to the consumers. It  
24 tells you a fictitious number, that represents how much  
25 energy they expect to save. Our machine will probably,

1 if it was truly rated, would be twice as efficient as  
2 the EF would indicate, simply because of the tub size  
3 factor. I would rather see, I would rather go as a  
4 consumer to an appliance store and ask them how much  
5 water or energy it uses to do a load of laundry rather  
6 than get some factor, getting hard data, and I have  
7 done this, I have gone into several appliance stores  
8 and asked them, well, how much water does this machine  
9 use in a load and they don't know.

10 MS. NADER: Thank you.

11 Yes, sir?

12 MR. STEVENS: Charlie Stevens, Oregon Energy  
13 Office.

14 I just, I can point out just quickly that the  
15 energy guide label does have the energy use on it. So,  
16 the EF is simply for standard compliance purposes.

17 But, what I am beginning to get here is that  
18 if some of us want data on MEF performance for various  
19 machines, we might as well start making plans to go get  
20 it, ourselves, because the data that you have needs to  
21 be adjusted, redone, some of it anyway. So, even if  
22 you let us know what it was, it isn't exactly what we  
23 would hope for anyway. Is that right?

24 MR. BERRINGER: There can be some errors in  
25 that data, yes.

1 MR. JONES: Earl Jones here, G.E.

2 Come on, Bryan, it is riddled with error. It  
3 is inaccurate. I mean, I don't think you should hold  
4 back in this discussion to say that the data is  
5 unreliable and therefore, the projections about what  
6 machines even today are capable of performing at,  
7 pardon the grammar, and therefore, can be the base on  
8 which we can build, the assumptions are simply wrong.  
9 And the data will have to be retested in order for it  
10 to have any credibility with the people who make the  
11 machines. I mean, is there any doubt about that?

12 MR. BERRINGER: If the manufacturers are  
13 willing to provide that, we can throw out this data  
14 altogether and then there won't be any question as far  
15 as what was done. That is really, would be the best  
16 information. And then there wouldn't be any question  
17 as far as a testing facility.

18 And as you stated there is a, there is  
19 something that we are trying to address, as you know  
20 with the RMC, to make sure that --

21 MR. JONES: Exactly. I just --

22 MR. BERRINGER: -- that is resolved.

23 MR. JONES: With the understanding that  
24 somehow we can tweak it or something.

25 MR. BERRINGER: No, we are not --

1 MR. JONES: Okay.

2 MS. NADER: Thank you.

3 Yes?

4 MR. MARTIN: Michael Martin.

5 How does the data that you got in testing  
6 compare with what was given to you by the  
7 manufacturers?

8 MR. BERRINGER: We do not have any information  
9 from the manufacturers on MEF at all.

10 MR. MARTIN: And you don't have any from  
11 anywhere else?

12 MR. BERRINGER: No. Other than what we  
13 tested.

14 MR. MARTIN: Then you have the world's best  
15 data. And I challenge the manufacturers to make it  
16 even better.

17 MS. NADER: Thank you.

18 Over here?

19 MR. MONTUORO: Lou Monturo with Amana.

20 I guess my question is that obviously this  
21 is, the baseline data is controversial. Is there  
22 plans to get, you are going to have to start with the  
23 baseline data to regulate some improvement or we don't  
24 have a baseline, is there plans to get more data, or is  
25 that what we are discussing now? Or are you just going

1 to take the numbers that are admittedly have  
2 discrepancies and use those as a baseline?

3 MR. BERRINGER: These, the data that we did as  
4 far as testing has nothing to do with the baseline. We  
5 were just trying to get our own idea. I mean, the  
6 manufacturers submitted the information on a baseline  
7 unit. Okay, we are just trying to as David Goldstein  
8 had said, try to an idea of what machines might match  
9 up with those efficiency levels that are in the  
10 rulemaking. So, we were doing that more for our  
11 internal knowledge. And it is not part of the baseline  
12 or any of the analysis. This is like a side issue.

13 MR. MONTUORO: But, isn't the proposal to --

14 MR. BERRINGER: We need you to use the mike so  
15 we can have you recorded.

16 MR. MONTUORO: Okay. Isn't the proposal to  
17 regulate the MEF number? Yes, no?

18 MR. RIVEST: Yes, but the cost data that was  
19 provided, which is at the basis of the analysis, has  
20 been provided by manufacturers according to their test  
21 results. Not according to the test results by this  
22 independent lab.

23 MS. NADER: Say your name, please, for the  
24 record.

25 MR. RIVEST: Mike Rivest of EDL.

1           MR. JONES: Well, Earl Jones here. And of  
2           course, Mike, you are right about the cost data, but am  
3           I not right and please correct me if I am not, that the  
4           assumptions which underlie the strawman here, in the,  
5           well, it is in the ANOPR as well, about where the  
6           standard might end up. Is that not based on some  
7           notion of what the MEF performance, that we have today  
8           might yield?

9           MR. RIVEST: There is no reliance at all on  
10          the data tested. It is all based on the data submittal  
11          from -- members.

12          MR. JONES: Just on the cost verus the  
13          efficiency?

14          MR. RIVEST: Right.

15          MR. BERRINGER: Right. And they have also  
16          seen results.

17          MR. RIVEST: -- the Department was trying to  
18          do with this testing is to understand what, where the  
19          market is currently as opposed to incremental cost for  
20          achieving these levels.

21          MS. NADER: Okay. Yes, Steve?

22          MR. NADEL: I had a second question, which  
23          relates to the three options you set forth as possible  
24          strawmen, if you will. Has the Department looked into  
25          at all with legal counsel, the question of if they do a



1 two tier standard, an initial tier, that takes effect  
2 three year, whether the period between those two  
3 standards has to be five years or whether there are  
4 options to, because you are promulgating them at the  
5 same time, the period could be narrowed?

6 MR. BERRINGER: I will look to Gene Margolis  
7 to see if --

8 MR. MARGOLIS: We have not looked at whether  
9 the period can be less than five years.

10 MR. NADEL: I would suggest that if you do  
11 want seriously consider that option, that is a very  
12 important issue, at least from our opinion. The way we  
13 see it, the schedule keeps slipping, the latest  
14 schedule you publish is, you hope to have a final rule  
15 in September, which is multiple months from what you  
16 just said a few weeks ago. That, therefore, if we did  
17 a two tier standard, effectively the second tier  
18 wouldn't go into effect until 2009, assuming you were  
19 meet your schedule. And that seems much too late, I  
20 think, basically, unless there are ways to narrow it  
21 down, the schedule from our point of view. These  
22 delays that DOE have basically, in our opinion, ruled  
23 out that two tiered option.

24 MS. NADER: Thank you.

25 I am concerned about our time situation.

1       There is a lot of work yet to be done in this area. My  
2       question to you is whether we have burning issues that  
3       need to be covered right now? I see a couple of  
4       people, okay. Terry?

5               MR. THIELE: Well, I guess my question, Terry  
6       Thiele, Frigidaire, my question is what the Department  
7       expects to get out of the workshop. If you want to  
8       check the boxes on having covered so many topics,  
9       without necessarily getting a full discussion, then we  
10      can move on ahead. But, I suspect that a lot of the  
11      participants here, that these are material issues that  
12      if you want to bedding of the issue, we take the time  
13      to vent the issue.

14             I just want to follow up though, a question  
15      to clarify. Did I understand ADL correctly to say that  
16      the scenarios that were being proposed here as  
17      strawmen, were based, were predicated upon manufacturer  
18      data? That that was the source for those numbers?

19             MS. NADER: Name, please.

20             MR. RIVEST: Mike Rivest, for ADL.

21             What you said is sort of a broad statement.  
22      I am not sure I understand what you mean by scenarios,  
23      so let me --

24             MR. THIELE: Well, just to clarify. The three  
25      scenarios that the Department of Energy has proposed as

1 the final possible outcome of the rulemaking with  
2 percentages for different tiers.

3 MR. RIVEST: My, that is just too general a  
4 statement to say that. All I wanted to say was that  
5 the data submittal, the cost data, and the energy  
6 efficiency numbers were based on the data submitted by  
7 manufacturers. To generate the scenarios, there is a  
8 whole slew of assumptions that have nothing to do with  
9 the manufacturer data submittal.

10 MR. THIELE: Okay. That was the  
11 clarification I wanted. Thank you.

12 MR. BERRINGER: Thank you.

13 MS. NADER: Thank you. I saw another hand  
14 over here.

15 MR. NEAL: This is Chad Neal from Staber  
16 Industries.

17 We are just looking for a simple solution to  
18 an agreeable number for energy factors, so that the  
19 consumer can go into a store and they want to how  
20 energy efficient Washer A is versus Washer B, at doing a  
21 standard load of laundry. And we are just looking for,  
22 if the standard load is seven pounds as you test,  
23 simply count the gallons of water, how much energy it  
24 is to heat that hot water, and how much energy to  
25 washer's operating motor is using. And that is going

1 to be a number for every single washer. How energy  
2 efficient is it at doing an average test load? And  
3 that would be the most agreeable number that consumers  
4 could relate everything equally.

5 MS. NADER: Okay.

6 MR. JONES: Earl Jones.

7 The only problem with the request for  
8 simplicity, is this is a regulatory proceeding. And  
9 that is something of an oxy moron, I guess.

10 It maybe worth commenting that fortunately or  
11 unfortunately, the way this is, these machines are  
12 going to valued is based on a test procedure, which has  
13 already have been determined. And that is a whole  
14 different can of worms. And I don't know whether or  
15 not you are going to get a lot of support for going  
16 back to that one. So, I just mention that factor here.

17 MS. NADER: Gentleman at the mike?

18 MR. GREGG: Tony Gregg, City of Austin.

19 I just want to bring up the issue of the  
20 water factor analysis, I guess we are going to talk  
21 about that more later, but I think that needs to be one  
22 of the factors considered in part of the labeling  
23 requirements, because consumers are more in tune with  
24 how many gallons of water a machine uses than how many  
25 kilowatts or whatever it uses. So, that needs to be

1 part of the analysis.

2 Secondly, as far as the scenarios, certainly  
3 we would support a more stringent standard and earlier  
4 date rather than drawing it out for eight more years,  
5 when we are many years pass when the rule should have  
6 been adopted already.

7 At third thing is sort of, you know,  
8 if this process gets dragged out indefinitely, you  
9 know, there is still possibilities that some of the  
10 states might consider their own independent standards.

11 So, I think it would behoove us all to get a  
12 national standard and get it at an earlier date.

13 MS. NADER: Thank you.

14 MR. JONES: Earl Jones. Is that a sentiment  
15 of what Texas might do? Well, I understand there are  
16 some impediments that, not the least of which are just  
17 plain old politics, at least in Texas.

18 You know, Bryan, I will just one observation,  
19 again, I am not sure what your purpose was in putting  
20 these out, but it seems to me that one benefit that  
21 they might serve is at least in providing some, I  
22 guess, worse case, best case, depending upon your point  
23 of view.

24 MR. BERRINGER: Right.

25 MR. JONES: As the proceeding goes on. But,

1       it seems to me that it is going to take a lot of work  
2       in this rulemaking to get to the point of making,  
3       providing support, if you will, for anyone of these  
4       solutions and that certainly is going to be true for, I  
5       guess, what is the third scenario, if I am looking at  
6       that right, the so called two phase approach.

7               I did want to have a question for the follow  
8       up on Steve Nadel's and that was, you may not have  
9       looked, Gene, at the question of whether they had to be  
10      five years. Have you looked at whether it can be a two  
11      staged period with any kind of a lag between the two?

12             MR. NADEL: Isn't that, to you asking as far  
13      as legally.

14             MR. JONES: Yes.

15             MR. NADEL: And I think with refrigerators as  
16      an example of the phase in, that a similar situation.

17             MS. NADER: Eugene Margolis for the record.

18             MR. MARGOLIS: I think refrigerators was the  
19      three years, but I don't recall. We have not discussed  
20      how many years we would consider whether it be, say a  
21      lenient standard first and then go three, four or five  
22      years for a more stringent standard. There has been no  
23      discussion.

24             MR. JONES: So, there is no, I guess, can I  
25      assume that since the Department put out that as a

1 possibility, that the Department has determined that  
2 that approach would be lawful?

3 MR. MARGOLIS: Yes.

4 MR. JONES: Okay.

5 MS. NADER: Thank you.

6 Other burning comments? Yes?

7 MR. BEST: Richard Best, Whirlpool.

8 Just to comment on some of the issues here  
9 brought up in the last few minutes and particularly  
10 relating to the MEF values and the generation of  
11 databases for that. Several people commented it would  
12 really be great if the manufacturers would just supply  
13 these numbers. I would say from Whirlpool's view  
14 point, we would not be in favor of that for a variety  
15 of reasons. But, one in particular is the MEF numbers  
16 that DOE, themselves, have generated through, you know,  
17 contractors and such, do not seem to hold a lot of  
18 credibility within this group. I am not sure coming  
19 from five or ten manufacturers that the data would be  
20 anymore credible. And particularly, with a standard  
21 that none of us have, have a lot of experience with  
22 other than a few trials and submitting sample database  
23 here or there.

24 And the other side of it is basically it is a  
25 real question of if we did that, where would all this

1 data end up and what would it ultimately be used for  
2 once it is published, model by model for everybody?

3 You know, and I guess lastly is we just have  
4 better ways to use our resources at this time. And I  
5 would suggest if somebody really thinks they want to  
6 know the answer, they can go out and spend their money  
7 and do it.

8 MS. NADER: Thank you.

9 Anyone else?

10 (Pause.)

11 MS. NADER: Yes.

12 MR. MARTIN: Michael Martin.

13 I would like to have a clarification of that,  
14 you mean to say you haven't tested these things  
15 yourself. You couldn't be saying that.

16 MR. BEST: I am saying that. In fact, we are  
17 not going out and pulling our models into our labs and  
18 running all these tests and generating databases of  
19 that nature.

20 We have some general ideas as to where our  
21 products fall and such and where our competitors fall.  
22 But, certainly we are not spending a lot of time to get  
23 an accurate number that would be published and put out  
24 for everyone to scrutinize and compare with.

25 MR. MARTIN: So, I guess I am kind of lost



1       here, because I shouldn't be lumping you and G.E.  
2       together here. But, as I listen to this, I hear,  
3       saying that DOE's stuff is all wrong. And you saying  
4       we don't know what the answers are. If you don't know  
5       what the answers are, you can't tell me that Bryan is  
6       all wet.

7               MS. NADER: Richard Best for the record.

8               MR. BEST: Yes, what we are hearing here is  
9       that there are several people in the room here that are  
10      questioning the accuracy and you know, how great and  
11      good this database is.

12              MR. MARTIN: Yes. And seems like  
13      Whirlpool --

14              MR. BEST: And at the same time asking us,  
15      well, why don't we supply the data.

16              MR. MARTIN: Yes.

17              MR. BEST: The lab that tested that is  
18      probably similar in qualifications to the labs that  
19      many of the manufacturers have. Why would we be even  
20      more credible when all we give you is a sheet of  
21      numbers, and you say, but I need to know exactly how  
22      you got the numbers. We got them by the test  
23      procedure. They got theirs by the test procedure. I  
24      don't see the value added in us spending a lot of our  
25      resources to generate it. It is not really relevant

1       here model by model.

2                   MS. NADER: Okay.     One more question or  
3       comment and then we have go to break.   Eugene?

4                   MR. MARGOLIS: Eugene Margolis, DOE.

5                   This is response to the City of Austin, which  
6       said that they would then, if DOE is still not issuing  
7       standards that the City of Austin may in its wisdom  
8       issue a standard.   I would just like to recall to them  
9       that there is the issue of preexemption.   And we can,  
10      we in DOE consider that the field is preexempted.  
11     Congress did preexempt this field.

12                  MS. NADER: Okay.     Michael?

13                  MR. MARTIN: Yes, I, the similar discussions  
14      are being going on in a lot of states, not just Texas.  
15      And not talking about the city.   But, our understanding  
16      of the Act, is that not only is the preexemption, but  
17      there is a means of petitioning for exemption from  
18      preexemption.   And that, in fact, when you have no  
19      standard standards, we did petition for exemption from  
20      preexemption and so, it is tedious.   We are  
21      preexempted, but there is a way out also.

22                  MR. MARGOLIS: You can petition us for an  
23      exemption from preexemption.   That procedure is not the  
24      same procedure that was initially.   And the original  
25      procedure was, you might say a straight forward

1 procedure and now in reading the language of Section  
2 327, it is much more difficult for the petitioner to  
3 show enough that he could win his case.

4 MR. MARTIN: We agree with that.

5 MR. MARGOLIS: And that is the reason I assume  
6 no one has petitioned DOE for an exemption.

7 MS. NADER: Okay. I see two hands. Steve,  
8 you go first, then you and then --

9 MR. BERRINGER: We have one other.

10 MS. NADER: And one other. All right, those  
11 three and then we go to break. Thank you.

12 MR. ROSENSTOCK: Steve Rosenstock, EEI.

13 And I think if Mr. Margolis is making the  
14 decision, then you might as well save the paper right  
15 now.

16 MR. MARTIN: I have been working with Mr.  
17 Margolis since the mid'70s.

18 MS. NADER: Yes.

19 MR. STEVENS: Charlie Stevens from Oregon.

20 I just wanted to point out to Gene that as,  
21 it may be a tough case but as each year passing without  
22 a standard, I think it gets a little easier to make the  
23 case.

24 MS. NADER: Thank you.

25 MR. MARTIN: We would hope then someone would

1 petition DOE.

2 MS. NADER: Thank you. Okay, gentleman at the  
3 mike.

4 MR. POPE: Ted Pope, Pacific Gas and  
5 Electric.

6 Just a clarification for my benefit from DOE,  
7 what was the reason that a normal proposal, one of the  
8 three that I would have expected, which is a something,  
9 I don't know, it is 40 or 45 percent, but the  
10 economically justified standard, you know, within three  
11 years of promulgation, why wasn't that one of the  
12 primary options? Does that make sense?

13 MR. BERRINGER: I think your question is that  
14 is the first option as soon as, if the rule went into  
15 effect. I think that is sort of the first scenario,  
16 would be three years after the rule went in place, you  
17 look at 2000, 2002, and then it would get in effect in  
18 2005. So, I think that is sort of the first option.

19 MR. POPE: Except for you have, what to me  
20 looks like a weaker than expected standard. It looks  
21 like it is less than what is economically justified  
22 based on my perusal of the documentation.

23 MR. JONES: Earl Jones, G.E.

24 Well, again, that raises the other question,  
25 which Steven mentioned before and again, the one we

1 will be getting to this afternoon and that is the, that  
2 is the cost assumptions behind these numbers, which  
3 presumably justify these very stringent standards. It  
4 is far from clear that these levels are justified,  
5 based a real look at the cost and what the projected  
6 savings actually are, or would be. That is, I think,  
7 another issue in which this rulemaking very likely  
8 could fall apart.

9 MS. NADER: Thank you.

10 MR. RIVEST: I don't want to speak for my job,  
11 but all the economic analysis has not been done. The  
12 part which is the economic analysis on manufacturers is  
13 not in the record yet. So, it is an incomplete record.

14 MS. NADER: Thank you. We are overdue for a  
15 break. It is 10 minutes to 11, please take your break  
16 and come back promptly at five after 11.

17 (Whereupon, a short recess was taken.)

18 MS. NADER: All right. Let's begin.

19 MR. BERRINGER: We want to try and finish up  
20 some of these topics. Some of the information like  
21 quality of data, the MAISY and data access, we can  
22 probably cover in this afternoon's presentations. Get  
23 into that.

24 We do have a few odds and ends that just sort  
25 of fall into the life cycle cost area, the warranty,

1 repair warranty cost. I know that was one of your  
2 things, comments, Glenn. At this point we do not have  
3 any data showing that there is a difference between  
4 warranty cost versus energy efficiency. Does anybody  
5 have or know of any type of information that would be  
6 available. I think last workshop, I think it was  
7 possibly G.E., I am not sure, if they had any  
8 information on warranty cost, any type of information  
9 like that.

10 MR. JONES: We will be following that with our  
11 comments.

12 MR. BERRINGER: Okay.

13 MS. NADER: That was Earl Jones, G.E.

14 Okay, yes, sir?

15 MR. SCHEEDE: Glenn Scheede again.

16 MS. NADER: Is that mike on?

17 MR. SCHEEDE: Does that work better?

18 MS. NADER: Thank you.

19 MR. SCHEEDE: I did hear from, I believe it  
20 was AHAM, indicated that there is a trade association  
21 with plans retailers perhaps that might have  
22 information on extended warranty and such agreements.

23 But, the other point I would like to make  
24 is that the burden should not be on interested parties  
25 in this proceeding, such as consumers to produce the

1 data. The burden should be on the Department of Energy  
2 to find the information. You are the ones that are  
3 operating with our tax dollars, and it is your  
4 responsibility to compile, to come up with the data,  
5 not mine.

6 MS. NADER: Thank you.

7 MR. BERRINGER: Okay. We have a couple of  
8 topics in the life cycle cost. Also, the life of the  
9 appliance used in the LCC. And was this another one?  
10 To my knowledge there wasn't, I hadn't seen any  
11 comments before as far as the life of the appliance.

12 MS. NADER: Glenn Scheede.

13 MR. SCHEEDE: You have -- Glenn Scheede again.

14 You have my comments that I believe you are  
15 substantially overstating the real useful life of  
16 appliance to the individual, to the initial purchaser  
17 of that appliance. However, I thought you were going  
18 to go into that in more detail with the life cycle  
19 costs discussion this afternoon.

20 MR. BERRINGER: Well, do not have life cycle  
21 costs on the agenda. I mean, it was presented at the  
22 March workshop.

23 MR. SCHEEDE: Well, you have my comments. I  
24 noticed you narred them in the Federal Register notice,  
25 but you do have them. They are on the record, I

1 believe, that I believe you are overstating the life of  
2 the appliance and that you should be using information  
3 on the time that the purchaser of that appliance is  
4 likely to be using it, not what it might be on a  
5 secondary market.

6 MS. NADER: Thank you.

7 MR. BERRINGER: Why don't we just, we will  
8 finish up this list. The AO 99 forecast analysis, I  
9 think we will be using that data. I think we are  
10 incorporating into it.

11 MR. MCMAHON: We can discuss that in the --

12 MR. BERRINGER: Okay. All right.

13 Quality data we can definitely address in  
14 the, excessive data when we get into the marginal  
15 energy rate, unless there are some specific, I mean,  
16 any other analysis, unless there are specific comments  
17 pertaining to analysis that has already been done.

18 MS. NADER: Does anyone have anything on that?

19 MR. BERRINGER: Okay. I know, Steve, this  
20 was your topic, Steve Nadel, you had talked about, I  
21 think relies, goes back to LCC and also, I think the  
22 next couple of things here. Savings for detergent as  
23 far as LCC. Do you have, again, I am sorry to ask for  
24 information, we don't have, we have information stating  
25 that there, you know, there is not, no change in



1       detergents. I mean, as far as what might be for the  
2       efficiency, for the high efficiency as far as offering  
3       the same sort of price range as far as detergents. Do  
4       you have or does anybody can suggest anything as far as  
5       how we want to use the detergents or how they might be  
6       used or your concern as far as do you feel there is a  
7       substantial difference in the price of detergents that  
8       would warrant, to be included in the analysis, I guess  
9       is my question?

10               MR. NADEL: Steve Nadel, ACEEE.

11               The point I was making was not is there a  
12       substantial difference in the relative cost of the  
13       detergents. The point I was making that a number of  
14       surveys seem to have found that when people purchase  
15       the high efficiency washers, basically the H Axis  
16       machines at this point in the surveys I have seen, some  
17       of them use the same amount of detergent. But, some of  
18       them use less detergent. And I believe in the Bern  
19       Study, and I believe, Charlie, correct me if I am  
20       wrong, that coming out of the Northwest there is some  
21       survey data indicating how, what proportion of  
22       consumers use less detergent and so on.

23               Likewise, I don't know, Ed, has PG&E ever  
24       done a survey?

25               MR. NADEL: Okay. So, basically I was

1       arguing that there are some objective data sources that  
2       DOE should use and that that is very important, you  
3       know. If Proctor and Gamble, so far from what I have  
4       seen, they have made statements that they don't think  
5       there are, if they have any specific data on actual  
6       consumers, I would be very interested in seeing that as  
7       well. But, DOE should collect the available data.  
8       They already have the Bern Study, I believe that the  
9       Northwest will be submitting data. Anybody who has  
10      data, they should submit it and DOE should look at the  
11      data that is submitted, not the opinions, but the data  
12      and based on that proceed.

13               MR. BERRINGER: Okay. Thank you.

14               MR. JONES: Earl Jones, G.E.

15               And to the extent that indeed such data is  
16      made available, I would assume that the Department  
17      would look at exactly what the data was. I mean, my  
18      understanding, and those who know, I am sure will weigh  
19      in, that to the extent the consumers have "used less"  
20      detergent in these machine, it is because they haven't  
21      had the detergent formulated for those machines. And  
22      if they use conventional detergents in those machines,  
23      indeed, they have a disaster on their hands. So, they  
24      have learned to use less. The manufacturers of both  
25      the machines and the detergent do not recommend any

1 smaller cost per dose, if you will, but we are  
2 recommending an equivalent dosage for those machines,  
3 for which will have these, the same cost. There is no  
4 evidence of any reduction in cost or consumer savings  
5 associated with changing detergents for these machines.  
6 And that is just the fact, not the -- The anecdotal  
7 information about what wrong detergent people are using  
8 is simply not relevant.

9 MS. NADER: Thank you. At the mike?

10 MR. LINARD: Jack Linard, Unilever-HEP.

11 The Bern Kansas Study has been cited because  
12 on average the amount of detergent usage declined from  
13 Phase 1 to Phase 2. But, if you look at the data,  
14 Phase 1 was an uncontrolled study in which people used  
15 the detergent they were normally using. And in fact,  
16 dosages of up to one and a half to two cups were  
17 reported. That is quite a bit higher than the  
18 recommended dosage for almost any detergent these days.  
19 There are products still on the market, however, which  
20 have very high dosage recommendations.

21 Phase 2 is a much more controlled study. Most  
22 of the people used one product and dosed it according  
23 to package instructions. In fact, if you look at the  
24 instances of under dosing from Phase 1 to Phase 2, it  
25 decreased I think fairly significantly. So, in fact,

1 people were actually dosing the recommended amount of  
2 the appropriate detergent for that machine. Yes, the  
3 average came down simply because we lost a lot of the  
4 people dosing or really overdosing the products.

5 Earl is exactly correct when he talks about  
6 you have to make sure what your study, your consumer  
7 survey is reporting on. If people, in fact, do use  
8 detergents which are higher foaming then the machine  
9 can actually tolerate, you actually have to cut the  
10 dose to make it work right. But, what we need is  
11 information regarding what happens if you dose the  
12 amount of detergent of a detergent that is specifically  
13 formulated for that machine. And that is exactly what  
14 the Bern Kansas Study did. And in that regard, if you  
15 look at it, people dosed the right amount of detergent.  
16 There was very little overdosing. There was actually  
17 less under dosing.

18 MS. NADER: Thank you. Other input? Yes?

19 MR. NEAL: This is Chad Neal from Staber  
20 Industries.

21 With our current machine with standard  
22 detergent we are saving the consumer on average 75  
23 percent using only a maximum of an ounce, on average.  
24 And therefore, since that is a cost of doing laundry,  
25 we are requesting that be included in the life cycle

1 cost, since it is a cost of doing laundry.

2 MS. NADER: Thank you. Anyone else?

3 MR. POPE: I have lost a train of what topic  
4 we were restricting ourselves to just now. But, I am  
5 wondering if there has been some additional thought on  
6 the valuing the prolong life of clothing. You know, I  
7 haven't heard many people in this group argue that  
8 these more efficient washers tend to clean better and  
9 if so, aren't there significant, in fact, most  
10 significant impacts of these new washers is that the  
11 clothing last longer.

12 MR. BERRINGER: Could you state your name,  
13 please?

14 MR. POPE: Ted Pope, Pacific Gas and  
15 Electric.

16 MR. BERRINGER: Thanks.

17 MS. NADER: Thank you. Do you have what you  
18 need on the subject?

19 MR. BERRINGER: I think we have one more.

20 MS. NADER: Yes, sir?

21 MR. LINARD: Jack Linard, again, Unilever.

22 With regard to reducing the level of a high  
23 sudsing detergent, yet, we know you have to do that in  
24 order to keep the suds profile down, but we have done  
25 quite a number of studies which show that your

1 potential performance is considerably lowered when you  
2 cut the level of detergent beyond that which we  
3 recommend. And I think other people in the past  
4 workshop in March have stated the same thing, too. So,  
5 yeah, if you do use less your performance is going to  
6 go down. That is the bottom line.

7 MS. NADER: Thank you. Okay. Shall we move on  
8 to -- Is there one more?

9 MR. ECKMAN: I don't whether analytically  
10 performance --

11 MS. NADER: Name, please.

12 MR. ECKMAN: Tom Eckman, Northwest Power  
13 Planning Council.

14 I don't know whether analytically performance  
15 goes down based on soil chemistry in the clothes, but  
16 from the perspective of the consumer acceptance. The  
17 wash wise consumer satisfaction survey clearly  
18 indicated that even with less detergent use, the  
19 consumers thought that their clothes, thought,  
20 perceived, that their clothes were as clean if not  
21 cleaner than they had before. So, the analytics versus  
22 consumer acceptance question is probably best dealt  
23 with consumer surveys this afternoon, but I don't want  
24 to leave the impression that consumers are unsatisfied  
25 with H Axis machines that are being purchased.

1 MS. NADER: Thank you. Anyone else?

2 MR. BERRINGER: Okay.

3 MS. NADER: All right. Shall we talk about the  
4 cost of units?

5 MR. BERRINGER: I think was again, Steve, I  
6 think you had, I think it comes back to you, you still  
7 had a question as far as the difference between the 40  
8 and 45 percent levels as far as the data was concerned.

9 MR. NADEL: Yes, we had some concerns about  
10 the cost estimates that came to from the data for the  
11 40 and 45 percent. In the previous workshop, we were  
12 told, well, yes, we will be doing some additional  
13 checking on that and particularly the reverse  
14 engineering that provides some useful information. I  
15 believe there is a presentation on that a little later  
16 today.

17 MR. BERRINGER: Yes.

18 MR. NADEL: It would be fine to postpone this  
19 discussion until then, hopefully that analysis will  
20 help answer these questions.

21 MR. BERRINGER: Okay. Thank you. We will  
22 make sure we address that. We will leave these on the  
23 list if we don't, on the board.

24 Retail markup, I think, was also yours,  
25 Steve. It had to do with, you had a question about

1       where, how it was derived. It was also presented at  
2       the last workshop, so I think we should probably --

3               MR. NADEL: Again --

4               MS. NADER: Steve Nadel.

5               MR. NADEL: Steve Nadel, ACEEE, again.

6               At the last workshop, there was a statement  
7       on the record from Circuit City regarding what they  
8       perceived to be the typical markups in the industry  
9       which were lower the values by DOE. We note that in  
10      the NOPR DOE, interpreted those in terms of gross  
11      markup versus net markup, but still came up with a 33  
12      percent markup based on the Circuit City and other  
13      publicly available data, not the 40 percent markup that  
14      DOE used. So, I guess I have a question about given  
15      that latest analysis, which shows a 33 percent markup  
16      makes sense, what is the rationale for 40 percent  
17      markup? But, the other thing is, again, it is as per  
18      the, request for additional information this issue.

19              MS. NADER: Do we have any information on that  
20      subject?

21              MR. RIVEST: What I can add, Steve, is the  
22      data sources that were used in that previous analysis,  
23      I believe, an additional year's data is available now.  
24      And I will make sure that that is incorporated in our  
25      thinking here. That that includes consumer expenditure



1 surveys, and current industrial reports, published  
2 government sources.

3 MS. NADER: Thank you.

4 MR. BERRINGER: Okay. We have rebates, I  
5 guess was added on to the other thing. And that may be  
6 something we can discuss this afternoon when we talk  
7 about the utility analysis.

8 Is there anything else that we have missed,  
9 that we feel need to discuss now?

10 Steve?

11 MR. ROSENSTOCK: Steve Rosenstock, EEI.

12 There was one thing about shipments, was that  
13 on the list, I am not sure which list we were working  
14 on.

15 MR. BERRINGER: Yes, shipments will be  
16 discussed later this afternoon. But, if you have  
17 specific question, then we can go ahead.

18 MR. ROSENSTOCK: Oh, okay. I didn't know if  
19 it was this morning or this afternoon. So, okay. Then  
20 I will wait until this afternoon.

21 MR. BERRINGER: Okay.

22 MS. NADER: Okay. At the mike?

23 MR. MODTLAND: Dave Modtland for Frigidaire  
24 Home Products.

25 Just a clarification on this last discussion

1 on detergent usage. I think all the Bern studies and  
2 the other Washwise and other studies, when they are  
3 talking about high efficiencies, those were all  
4 relating to horizontal axis, where we were trying to  
5 prevent that separation. So, I don't know if you can  
6 apply some of the same things to high efficiency  
7 products.

8 MS. NADER: Thank you. Anything more?

9 MR. BERRINGER: Any additional comments or  
10 concerns?

11 Okay, well, if we have time, at the end of  
12 the, near the end, we can come back and address or if  
13 there is anything on the parking lot we want to come  
14 back and look at this afternoon.

15 At this time, we about back on schedule here.  
16 First, Steve Mariano, Arthur B. Little to talk about  
17 the reverse engineering.

18 (Pause.)

19 PRESENTATION BY STEVE MARIANO:

20 MR. MARIANO: Okay. Can everybody hear okay?  
21 Is that all right?

22 My name is Steve Mariano. Thank you, Bryan,  
23 for introducing me. I am going to talk today about our  
24 manufacturing cost analysis, specifically our Phase 2,  
25 which was to look at differential cost for higher

1 efficiency designs.

2 I have already presented in the past our  
3 Phase 1 which was our baseline cost analysis. I am  
4 going to just touch on the objectives of what we were  
5 doing in Phase 1, also recover some of our assumptions,  
6 just to make sure that we have got a good picture of  
7 where we are with Phase 2.

8 Phase 1, primarily we look at high volume,  
9 high sales volume, vertical axis washer, currently  
10 available today. We actually looked at two units and  
11 aggregated that data and created a baseline full  
12 production costs for that technology or that currently  
13 available system. And the purpose of doing that was  
14 primarily so that we could then make comparisons using  
15 in our Phase 2 the Whirlpool prototype design that has  
16 been in question as well as some commercially available  
17 H Axis designs.

18 So, the Phase 1 was to key in establishing  
19 the methodology and how we were going to go about the  
20 analysis as well as generating a differential cost. If  
21 we were to just to an analysis of a higher efficiency  
22 designs, the Phase 2, without having that baseline, we  
23 wouldn't really be comparing apples to apples. We  
24 would be making comparisons to data that may have been  
25 collected differently, may have been generated

1       differently, and had different assumptions. So, that  
2       was the main reason for doing a Phase 1 and reviewing  
3       that first.

4               As I have stated already, the Phase 2  
5       objectives here were to evaluate the prototype  
6       Whirlpool vertical axis, higher efficiency design. One  
7       of the key aspects of this was to maintain  
8       confidentiality of data. And that is why we are going  
9       to be presenting a lot of the results as differentials,  
10      presenting ranges of data, as well as presenting  
11      percentage differences. And that is to keep that  
12      confidentiality and not to present absolute numbers.

13             And also one of the main objectives is to  
14      obtain comment from the stakeholders relative to this  
15      analysis.

16             Actually this work has been, we did a lot of  
17      actual physical tear down and analysis back in late  
18      spring, early summer and our analysis has been  
19      essentially complete. We have done some minor  
20      refinements, but the information you have in your  
21      packets today is our completed analysis at this point.

22             We did two vertical axis machines. And that  
23      is typically the description we used of how we would  
24      characterize those. We also looked at two H Axis  
25      designs that were commercially available. We actually

1 purchased units on the market. And then, finally, the  
2 Whirlpool prototype design was provided to us. We had  
3 access to that by Whirlpool.

4 To reiterate our manufacturing facility  
5 assumptions, we have taken a typical practices plant.  
6 We did visit and talk with all of the manufacturers.  
7 We have reviewed some of this information in Phase 1.  
8 Typically, we looked at, well, one and a half million  
9 units a year and now there are manufacturers that are  
10 more or less. But, we use this as a our baseline.  
11 Again, we are making comparisons of Phase 1 to Phase 2,  
12 so we are keeping the manufacturing facility  
13 assumptions the same. And that is why we did it this  
14 way.

15 Again, you can see some of those are  
16 Greenfield Investments, so it is complete investment to  
17 manufacture these units and not a differential  
18 investment. It would be a differential from a complete  
19 investment for vertical axis versus a complete  
20 investment for some higher efficiency design.

21 Again, to reiterate some of our assumptions.  
22 We are looking at full production costs in this  
23 analysis. We have not considered SG&A, the cost  
24 associated with R&D or interest payments that you might  
25 be making. And there is a lot of variability in that

1 from manufacturer to manufacturer. What we focused on  
2 was just production costs, which would include direct  
3 labor and materials, as well as factory overhead.  
4 Overhead associated with operation of a facility or  
5 plant.

6 Again, just to show you some of the  
7 assumptions we used, again, these are the same  
8 assumptions we have used in Phase 1, so we have carried  
9 these forward into Phase 2, again, to make an apples to  
10 apples comparison.

11 We presented the data here in a fashion that  
12 allows, again, the confidentiality of data. What we  
13 have done is generated a cost range for these designs.  
14 The range has been generated using our Monte Carlo  
15 simulations as we did in Phase 1. Using those  
16 parameters that I outlined and I will show you some of  
17 those again here, just to reiterate what those were.  
18 But, we generated a cost range. And as you can see the  
19 vertical prototype is well within the range of the  
20 current H Axis units that we looked at.

21 These were the key parameters that we used in  
22 the Monte Carlo simulations. Basically, what we have  
23 done here is made some variations along labor rate,  
24 plan output, the depreciation life on equipment,  
25 investment. And so you can see those parameters, that

1 is describes the probability distribution. I will show  
2 you what those mean as well as the range that we used  
3 and if, for triangle distributions, the most likely  
4 value. So, this was sort of the basis of our  
5 simulation to create that range. And this corresponds  
6 to our Phase 1 analysis, which we did as well on these  
7 same parameters.

8 Just to explain what those distributions are.  
9 Using a uniform distribution, what we are saying there  
10 is that the probability that the, in this case, the  
11 labor rate is between 17 and 28 dollars is equal. That  
12 it could be anywhere between there. We actually in the  
13 baseline used \$24.00, but we are saying that it could  
14 be anywhere in that range. While triangle  
15 distribution, we are using a most likely value, and  
16 then a range around that. And what that says is the  
17 most likely value is a high probability that that is  
18 the number that is most likely. And that that overall  
19 range is possible.

20 To give you some more information on our  
21 analysis, rather than just give you a number, I wanted  
22 to try to explain what was driving some of those costs,  
23 that differential costs. And I am going to give you  
24 some information here, mostly on a percentage basis.  
25 Again, to protect the individual manufacturers. We

1        have also aggregated the H Axis designs as we had done  
2        before. We have costed those individually, but then by  
3        using the Monte Carlo simulation, and taking averages,  
4        we have aggregated those together. And so, we are  
5        going to show you that here.

6                    As you can see here, one of the major  
7        differentiators or cost drivers in the higher  
8        efficiency designs, is the sophisticated controls they  
9        use. And you can see that their cost grows as an  
10       overall percentage of the total cost to that product.  
11       In some cases, nearly double the percentage in the  
12       vertical axis baseline units that we looked at in Phase  
13       1.

14                   We also generated investment estimates for  
15       these designs. I think the major thing to see here is  
16       that they are all within the same range. Again, I  
17       remind you that this is a Greenfield investment, so it  
18       is not the cost to change over a factory, but it is a  
19       cost to build a factory from scratch, basically. And  
20       you can see that they fall within the same range for  
21       those two, well, actually for the, all three of the  
22       different design concepts.

23                   Now to spite those falling in the same range,  
24       I am not saying that they are the same, and that the  
25       investment is the same. Our analysis is to show the



1 investment shifts into different types of manufacturing  
2 processes. For the V axis, there is a large of  
3 percentage of the manufacturing was machine components,  
4 while in the aggregated H axis and V axis prototypes,  
5 that shift has changed. There is less machining  
6 operations but there is more either injection molding  
7 in one case or more stamping and bending operations in  
8 the other. So, really you have just shift in the  
9 manufacturing processes for each of those designs.

10 And actually that is evidenced in the average  
11 depreciation life as well, where they have gone up for  
12 H Axis and the vertical axis prototype. And that is  
13 primarily because the injection molding and stamping  
14 equipment is of longer life. Now, our average  
15 depreciation life is based on both the tax life of  
16 equipment as well as its useful life. We factored both  
17 of those in.

18 For more information on sort of a percentage  
19 basis, this shows the percentage breakdown of  
20 materials, direct labor and overhead. It shows for  
21 baseline vertical axis, we are looking at about 60  
22 percent of the cost is in materials, that is 60 percent  
23 of the full production cost. While in the higher  
24 efficiency, it averages more like 75 percent. So it is  
25 a larger percentage of the cost. So, it is not only

1       that the unit is more expensive, the materials are also  
2       encompassing a greater percentage. And materials  
3       include both raw materials as well as purchased  
4       components.

5               With regard to overhead, we saw that the  
6       average of the higher efficiency designs is a similar  
7       overhead structure as the baseline vertical axis  
8       washers. Which would follow from the manufacturing  
9       processes and operations and plant assumptions that we  
10      have made. It shouldn't change very much.

11             So, in summary, our Phase 2 results, we  
12      looked at three, three units, two H axis, commercially  
13      available machines, as well as the Whirlpool prototype.  
14      We did a complete tear down of those and generated  
15      manufacturing of full production costs, using the same  
16      methodology we did in Phase 1 and the same assumptions  
17      that we have used in Phase 1 for manufacturing  
18      processes, materials, etc. And then generated that  
19      differential cost. And as I presented in the range, if  
20      you looked at all of these high efficiency designs,  
21      they average from \$75.00 to 190.00, using our Monte  
22      Carlo simulation. And that would be the differential  
23      cost that we estimated.

24             Obviously, that cost is driven by product  
25      features, and performance and not strictly by

1 efficiency. I wanted to iterate that what we have done  
2 is taken actual units, actual product. We have not  
3 tried to design a higher efficiency unit. Have not  
4 made any assumptions about what could be or can't be  
5 removed from a product to defeature it. We have taken  
6 exactly what exists today, and generated our cost  
7 analysis around that, our differential cost.

8 So, if there is any questions, I will be  
9 happy to answer those.

10 MR. BERRINGER: Questions?

11 MS. NADER: Yes?

12 MR. MORRIS: Wayne Morris with AHAM.

13 I would just like to go back, if I could,  
14 Steve, to chart number 8 or page 8, I think. It is the  
15 bar graph of the, it is titled "Differential  
16 Manufacturing Cost Estimates, the V-axis prototype  
17 differential cost is well within the range of the H  
18 axis designs. It looks like this one, if you are  
19 looking for it. You have got it, okay, yes.

20 The title says that these are differential  
21 cost, but the V axis prototype, is that a differential  
22 cost or is that the absolute cost?

23 MR. MARIANO: No, that is a differential cost  
24 over our Phase 1 baseline, aggregated baseline.

25 MR. MORRIS: Okay.

1 MS. NADER: Other questions? Yes.

2 MR. GOLDSTEIN: In doing this analysis of the  
3 Whirlpool design, tell me if I am correct in assuming  
4 that you had a chance to look at the product, but you  
5 did not have a chance to look at the manufacturing  
6 facility that Whirlpool was using to produce this?

7 MR. MARIANO: In our Phase 1 analysis, we have  
8 actually visited all of the major manufacturers, five  
9 to be exact. And reviewed their manufacturing  
10 operations and discussed manufacturing processes that  
11 are typically used in their plants. Then what we had  
12 done is, for the vertical axis prototype, the Whirlpool  
13 prototype, we actually reviewed a prototype product,  
14 did tear down and built cost estimates based on actual,  
15 on that actual product, with the assumption that it  
16 would be built in this Greenfield site that would use  
17 similar manufacturing processes as is currently  
18 available in the industry.

19 MR. GOLDSTEIN: Okay. But, you had no  
20 information on what manufacturing process or equipment  
21 they might have used to give you that prototype, is  
22 that correct?

23 MR. MARIANO: Well, what we have done is we  
24 have looked at manufacturing processes that would be  
25 typical and would be needed to make those components

1 and high volume. And that is the assumptions we used.

2 MR. GOLDSTEIN: Okay. But, based on your  
3 judgement, not based on what they have done.

4 MR. MARIANO: We did not base it on what they  
5 actually, how they actually made the part. No, we  
6 based it on how you would actually make it in  
7 production.

8 MS. NADER: Other questions?

9 MR. NADEL: I have three questions. First,  
10 with this graph here. You show ranges, when you do a  
11 sample of a thousand you are going to get some real  
12 extreme values. You are going to get a real tendency  
13 toward the mean. Does this show the full extremes or  
14 is there some confidence, the 95 percent confidence,  
15 and you eliminated the five percent. I am just trying  
16 to characterize this distribution.

17 MR. MARIANO: Yes, no, we actually took,  
18 typically the simulations we ran, there are some  
19 outliers, but they would in the neighborhood of less  
20 than one percent. Those were eliminated, so this does  
21 represent a full range of cost that you would see.

22 MR. NADEL: But, am I correct in assuming that  
23 the values at the extreme top and bottom of each range  
24 are much less likely than the values toward to the  
25 middle of the range?

1                   MR. MARIANO: Yes, I would, and I can show  
2                   you, in our Phase 1 analysis, the typical simulations  
3                   we ran, yes, you are getting somewhat of a bell shaped  
4                   curve. There isn't any sort of strange things going on  
5                   at the ends. I will say that the range in the H axis  
6                   is really an overlap of two simulations. And so, if  
7                   you were to take sort of right in the middle of that,  
8                   it may be sort of two peaks in that range rather than  
9                   one single peak.

10                  MS. NADER: That question was from Steve  
11                  Nadel, for the record. Other questions?

12                  MR. NADEL: I had three.

13                  MS. NADER: Oh, you had three.

14                  MR. NADEL: I had three questions.

15                  A second and this gets to the issue that we  
16                  discussed briefly earlier, which is in part this  
17                  analysis is designed to be a check on the data that was  
18                  provided by AHAM. How would you characterize these  
19                  models as percent savings relative to the baseline,  
20                  just so we can, supposedly these are to be used, to  
21                  correlate and to check them.

22                  MR. MARIANO: I am not sure I understand what  
23                  you are asking.

24                  MR. RIVEST: I understand the question.

25                  Mike Rivest. Given the controversy and the

1 results of testing we have, I can't give you a definite  
2 answer. And the controversy places it well within the  
3 range where it wouldn't be meaningful to give you the  
4 numbers. In other words, is this a 40 or 45? Because  
5 I know that your concern is there. And I can't, we  
6 really couldn't answer that question right now.

7 MR. GOLDSTEIN: Could you give us a range?

8 MR. RIVEST: I think I just did in a way.

9 MR. NADEL: Let me than ask --

10 MR. RIVEST: I mean, it could be 35 or 45, but  
11 it is, you know.

12 MR. NADEL: What are DOE and ADL's plans for  
13 narrowing this down and allowing us to have this data  
14 as a comparison? What are you planning on doing? Are  
15 you just saying, well, gee, we can't do it, and  
16 therefore, there is no comparison? Or what are your  
17 specific plans for providing --

18 MR. RIVEST: I just, I do want to point out a  
19 difference here between this and the data that was  
20 submitted and make the statement that it is not, this  
21 is not exactly comparable data. In the data submittal  
22 you had manufacturers whose production, annual  
23 production is much lower than 1.4 million. You also  
24 had one manufacturer, at least one anyway, that had  
25 greater than that. So, I wouldn't anticipated that the

1 range of the data submittal from manufacturers would be  
2 greater than this. First caveat.

3 Also, this based on a Greenfield site. Now,  
4 how one considers the interactions between existing  
5 assets. How much of those are transferable, how many  
6 of those are stranded, that will shift you, either one  
7 way or the other. I mean, if you are going to a  
8 technology that is very similar, that may help you. If  
9 you are going to a technology that is radically  
10 different, and you have recent investments and that the  
11 existing technology, then your differential would be  
12 greater.

13 So, there is just a caveat there. Before you  
14 start preparing these as being one and the same.

15 I think they are useful because, you know,  
16 they are useful and not being benchmarked. The  
17 inherent costliness of these designs.

18 MS. NADER: Did that answer your question?

19 MR. NADEL: Not fully. We can have some  
20 further discussions later and we can submit some  
21 comments. But, I think is very important that this  
22 whole process was based on collective data from AHAM,  
23 but then having some independent ways to check and  
24 verify those. And I hope DOE is going to continue to  
25 allow that to happen. To just say, well, gee, we can't



1       really do that, I think is setting a very bad  
2       precedent, particularly, or at least I interpret this  
3       data, it tends to support the comments that we have  
4       made, about the 45 percent cost are too high. We will  
5       provide comments to that effect.

6               Final question. Your final conclusion talks  
7       about performance and features are driving cost. And  
8       you said, well, you haven't done any work to say, what  
9       features could be removed that do not affect  
10      efficiency? I was wondering how complicated would it  
11      be to try to do that type of an analysis because,  
12      again, getting back to the issue that we are trying to  
13      provide a check on the AHAM data, we want to, the AHAM  
14      data, as I understand it, is based, is estimates of how  
15      much it would cost to meet certain basic performance  
16      energy levels without lots of extra bells and whistles,  
17      to the extent these units have bells and whistles, that  
18      inflates the cost. So, I was wondering how complicated  
19      would it be for you to estimate a cost without bells  
20      and whistles?

21              MR. MARIANO: I think the issue there is,  
22      these machines are, it is a system design. And so,  
23      there are constant tradeoffs that are being made. And  
24      if you wanted to take features out, there may be  
25      tradeoffs in performance, maintainability, reliability,

1       that I think are very difficult to undertake in a small  
2       paper analysis. What needs to be done is actual  
3       product needs to be built. It needs to be evaluated.  
4       If you were to say I want to replace a component with a  
5       less expensive one, that unit would have to be actually  
6       built or that component would have to be put into a  
7       unit and actually tested to see what the impact would  
8       be on performance. There would be assessments of its  
9       reliability. In long term, will it last 10 or 12 or 13  
10      years without failing? Or is it going to fail in two?  
11      All of those issues, I think make it a very complicated  
12      thing to do.

13               MS. NADER: Okay. The gentleman at the mike.

14               MR. GREGG: Tony Gregg, from Austin.

15               MS. NADER: Say your name again, I couldn't  
16      hear you.

17               MR. GREGG: Tony Gregg.

18               MS. NADER: Thank you.

19               MR. GREGG: Along the same line. I guess we  
20      are not disclosing what machines were tested, is that  
21      true?

22               MR. MARIANO: Yes.

23               MR. GREGG: Can we make a big assumption about  
24      that or what?

25               MR. MARIANO: Other than the Whirlpool

1       prototype.

2                   MR. GREGG: But, on the other two, the H axis  
3       ones, we don't know which those are?

4                   MR. MARIANO: Well, at this point I guess DOE  
5       has decided not to reveal that.

6                   MR. GREGG: Okay.

7                   MR. MARIANO: And the primary reason for us  
8       not doing that is to actually, we have actually torn  
9       down product and evaluated its cost and generated cost  
10      estimates for that product.

11                  MR. GREGG: Okay.

12                  MR. MARIANO: The issue was is providing that  
13      to the industry. I think there is some question of  
14      confidentiality of that information. It is not that  
15      anybody else couldn't do it. Somebody else could buy a  
16      machine. Manufacturers have data on their competitors,  
17      have done this, but it is being, actually providing  
18      that information to everyone is an issue.

19                  MR. GREGG: Okay. Related to that, though,  
20      were the H axis machines and this relates to the  
21      previous question, similar in feature to the vertical  
22      axis machines? Because, I mean, most of the H axis  
23      machines, I assume you tested, are basically fully  
24      featured models, with extra controls and stuff like  
25      that for all the different cycles.

1 MR. MARIANO: Yes.

2 MR. GREGG: Was that an impact at all in the  
3 price differential?

4 MR. MARIANO: Yes.

5 MR. GREGG: Because they had more features  
6 than the vertical axis machine.

7 MR. MARIANO: That is correct. The units that  
8 we evaluated were either commercially available or the  
9 Whirlpool prototype that had more product features than  
10 was sort of typically what you would expect in the  
11 standard washing machine or the baseline that we looked  
12 at. They definitely had more features than the  
13 baseline. The reason we did that is we couldn't create  
14 a unit.

15 MR. GREGG: Right.

16 MR. MARIANO: So, what we did was took units  
17 that were currently available, that were higher  
18 efficiency, they also had some additional features.

19 MR. GREGG: And the answer is still the same,  
20 you can't determine what the difference between a unit  
21 without all of those features and one with all those  
22 features would be without reconstructing it or trying  
23 to modify it?

24 MR. MARIANO: Right. In essence, if you are  
25 asking me to say can I create a defeatured version of

1       these, there is a considerable amount of effort and it  
2       is complicated. I can't say that the range of data  
3       that we have seen, say for the H axis, represents  
4       different features in the product. And different  
5       levels of features. And so, you can't say that that  
6       range can be somewhat attributed to features.

7               MR. GREGG: Okay. And one final thing. Just  
8       in manufacturing in general, and this wasn't probably  
9       part of the, your analysis, but over time, as a new  
10      product such an H axis is introduced, wouldn't there be  
11      a declining cost in producing that product as the  
12      manufacturers found ways to produce a component  
13      cheaper, mass producing in larger quantities. And may  
14      also not be reflected in this analysis?

15             MR. MARIANO: There is a element of that. Our  
16      approach was to look at high volume, standard  
17      manufacturing processes that are used today and scale,  
18      relatively relied scale. So, we did try to accommodate  
19      for that. In other words we weren't costing a low  
20      volume product in comparing it to a high volume  
21      vertical axis baseline. We were looking at high volume  
22      production of these.

23             If you are asking can a manufacturer through  
24      a learning curve, in a product, reduce cost, yes, that  
25      is done and it is primarily driven though, through

1 design changes, lower cost design options and/or  
2 product of component developments that are really  
3 driving those things rather than efficiencies and  
4 manufacturing process. I would say that would have a  
5 less of an impact on these numbers.

6 MR. GREGG: Okay. Thank you.

7 MS. NADER: Steve?

8 MR. ROSENSTOCK: Steve Rosenstock, Edison  
9 Electric Institute.

10 But, it also seems based on your analysis  
11 that a key component is the sophisticated controls, is  
12 the primary, obviously is the primary reason for the  
13 incremental cost. So, those can't be defeatured  
14 without ruining the equipment. That is what it seems  
15 like, just kind of looking at the data that you have  
16 presented. I mean, it is the controls, and you need  
17 those controls for the higher efficiency. That is what  
18 it seems like.

19 MR. MARIANO: I would, I can't really say that  
20 you need those controls for the higher efficiency. I  
21 know that you need those controls for this product to  
22 perform as it does. Whether those are controls  
23 specifically for efficiency, or whether they  
24 accommodate certain performance features that their  
25 customer looks for in that product, it is hard to

1       separate those.

2               MR. ROSENSTOCK: Okay.

3               MR. MARIANO: But, these products built the  
4       way they are, need those controls.

5               MR. ROSENSTOCK: Okay.     Steve Rosenstock.

6               But, one of the end results of the more  
7       sophisticated controls is a higher efficiency.   Would  
8       you accept that?

9               MR. MARIANO: Yes.   That is part of it.

10              MR. ROSENSTOCK: Okay.

11              MS. NADER: Other questions.

12              MR. KESSLER: I have got a question.   You did  
13       such a fine job on your earlier analysis, where you  
14       took the baseline vertical axis unit.

15              MS. NADER: Excuse me, give us your name.

16              MR. KESSLER: Alan Kessler, Amana.

17              Broken down labor, overhead and material and  
18       the assumptions, and why aren't we doing that for these  
19       models that we know?

20              MR. MARIANO: Primarily the main driver behind  
21       this is, well, one of the reasons we didn't want to, we  
22       couldn't go into as much detail, is because of the  
23       nature of these products. Primarily, the vertical axis  
24       prototype.   Being able to do that made it very  
25       difficult for us to say, expose a lot of that

1 information about what components or sub assemblies  
2 were driving the cost. And so, in essence, if we  
3 couldn't do that for the vertical axis prototype, we  
4 felt that if we did for the H axis, you are not really  
5 getting a good comparison of those. And that is the  
6 reason we did the H axis, was to compare it to, to give  
7 you sort a comparison of this prototype.

8 MS. NADER: Other questions?

9 (Pause.)

10 MS. NADER: No further questions? Thank you,  
11 Steve.

12 Thank you, all of you for your hard work this  
13 morning. We will take an hour break. Does everyone  
14 know where to find lunch? Does anyone need information  
15 about where to get lunch? Okay. You are old hands at  
16 this.

17 We will break now and please be back exactly  
18 at one. We have a full agenda this afternoon as well.  
19 Enjoy your lunch.

20 (Whereupon, at 11:55 a.m., the meeting was  
21 recessed, to reconvene at 1:00 p.m., this same day,  
22 Tuesday, December 15, 1998.)



1 A F T E R N O O N S E S S I O N

2 (1:14 P.M.)

3 MS. NADER: Thank you very much for your hard  
4 work this morning. You have all worked hard and well  
5 together. We are going to go ahead and start our  
6 presentations, even though there are a few people who  
7 haven't come back yet.

8 Thanks very much to those of you who did come  
9 back on time.

10 The first person who is going to make a  
11 presentation is Jim McMahon. Jim, are you ready?

12 (Pause.)

13 MS. NADER: Okay. Jim McMahon, Consumer  
14 Marginal Energy Rates.

15 PRESENTATION BY JIM MCMAHON:

16 MR. MCMAHON: Thank you, good afternoon. I am  
17 Jim McMahon from Lawrence Berkeley National Laboratory.  
18 I am going to give you a brief presentation on the  
19 methodology for consumer marginal energy rates.

20 The first definitions, what are average and  
21 marginally rates? Average rates, average prices as  
22 used in the past, are the ratio of the total annual  
23 energy bill, by the total annual energy use. This can  
24 apply to whatever energy source, whether it is electric  
25 or gas, residential or commercial. Historically this

1 has been the data reported by utilities, that is total  
2 revenues received from residential customers, divided  
3 by electricity sales for residential customers, for  
4 example.

5 Marginal prices on the other hand, are the  
6 change in the bill divided by the change in the energy  
7 consumption.

8 Now, down at the bottom, point number three,  
9 the difference between marginal and average we are  
10 defining as epsilon. Some of the folks back at LBNL  
11 are using shorthand to use this as the percent  
12 difference between marginal and average price. It is  
13 just an easier way to think about it for those folks  
14 who are used to thinking about average prices.

15 What is changing? Previously the consumer  
16 energy bill savings and we are now talking about the  
17 life cycle cost calculation, were estimated using  
18 average energy prices. For clothes washers, those were  
19 national average value, something like eight cents per  
20 kilowatt hour for electricity.

21 The new approach is to estimate consumer  
22 marginal energy rates in calculating the energy bill  
23 savings. So, these are estimated by the household.  
24 The energy savings will be valued at the margin, not at  
25 the average. And it is important to know that when you

1 go to marginal rates, these are household specific. It  
2 depends upon the consumption of the household, and the  
3 specific tariff or rate structure that the household is  
4 facing.

5 What is the methodology? We are going to  
6 obtain a database of individual customers or building,  
7 in fact, we have already done that. And I will tell  
8 you in a moment what the databases are. We are going  
9 to design a nationally represented sample of customers.  
10 I will tell you what I have said in the other workshops  
11 to date, we do not plan to simulate every house in the  
12 country. That would be practically impossible. But,  
13 we do intend to get a sample that does represent  
14 different regions, different types of household,  
15 different types of consumer demographics and behaviors,  
16 so that we can account for those differences.

17 We have in mind something on the order of the  
18 size of the RECS sample, which is several thousand  
19 households and is a nationally represented sample.  
20 But, this will be a new sample.

21 Third bullet, we are going to collect tariff  
22 information. By that I mean, we are going to gather  
23 information of the specific rates schedules that  
24 customers face in different utilities around the  
25 country. That is already underway.

1           We are going to develop and test the method  
2           for matching the tariffs with the customers. There is  
3           no existing data set that has both a population of  
4           individual customers with their energy using  
5           characteristics and of the tariffs that they are  
6           paying. So, this is new work.

7           Finally, we will calculate the marginal rates  
8           for the sample of buildings and use that sample of  
9           estimates of the total population for the country.

10          Before I go on to the next slide, are there  
11          questions on the methodology at this point?

12                 MS. NADER: Name, please?

13                 MR. SCHEEDE: Glenn Scheede.

14                 Can you tell us, do I gather from this that  
15          you sort of dropped the RECS data from your new  
16          procedure now? Is RECS no longer in this, the EI RECS  
17          survey?

18                 MR. MCMAHON: Our plan right now is to in the  
19          future do less cost from a new national sample of  
20          buildings, not from the RECS and the reason for that is  
21          that the RECS households are not identified in fine of  
22          geographic detail for us to assign them to utilities  
23          and to rate schedules. It would be nice if we could  
24          simply assign marginal rates to the RECS households,  
25          but, there is no simple to do that.

1           As a caveat, some of the RECS surveys do have  
2           specific month by month utilities bills for the  
3           households. And we are looking at those to see if we  
4           can pull out of those some marginal rates. And then we  
5           would have the RECS sample as another national sample  
6           to look at. But, I am not sure whether that will be  
7           successful or not.

8           MR. SCHEEDE: Okay. Could you tell us either  
9           now or whenever it is appropriate in your presentation  
10          of what information you are going to make available to  
11          interested parties, concerning all the databases you  
12          have got, including the commercial database that you  
13          are buying. And where do we get information to know  
14          whether that, whether those data are representative,  
15          valid and reliable?

16          MR. MCMAHON: A couple of slides from now, I  
17          am going to list the databases. I will be happy to  
18          answer your questions about that.

19          MR. SCHEEDE: Thank you.

20          MR. ROSENSTOCK: Steve Rosenstock, Edison  
21          Electric Institute.

22                 Part of this also is that you, since for both  
23                 gas and electricity on the commercial industrial side,  
24                 that they might be, you know, choosing different  
25                 suppliers for different terms for their generation or

1 production, depending on the fuel source for the  
2 portion of the bill. You are going to be, part of  
3 this effort is to get information from the customers,  
4 correct? Will some of the data be from the customers  
5 as well, just as a backup?

6 MR. MCMAHON: In the long term, that is  
7 correct. And we have a couple of short term  
8 deliverables. Between now and February, which is when  
9 I promised to complete this work, we expect to get  
10 information from utilities. We do understand that with  
11 restructuring, there are other suppliers coming into  
12 the market. Right now there have small market share,  
13 but they are gaining. The intent is that in the long  
14 term, the Energy Information Administration surveys,  
15 both for residential and commercial, will gather price  
16 information or rather bill information directly from  
17 the individual customers, so that whoever their  
18 supplier is, whether it is a utility or someone else,  
19 we will have that information.

20 MR. ROSENSTOCK: Steve Rosenstock. I think  
21 that is a good approach to use because of the fact  
22 that, you know, with multiple suppliers out there and  
23 especially different terms of contracts, that will be  
24 a very useful piece, data set to have.

25 MS. NADER: Glenn?

1 MR. SCHEEDE: Glenn Scheede, again.

2 Does this mean that DOE is committing to use  
3 marginal energy rates in the future steps in this  
4 rulemaking? I noticed in the ANOPR, they have not used  
5 marginal energy rates. Does this mean they will from  
6 now on?

7 MR. MCMAHON: My understanding is that the  
8 Department intends to use marginal rates in the next  
9 round of life cycle cost.

10 Bryan?

11 MR. BERRINGER: That is correct, based on the  
12 Advisory Committee recommendations we will be using  
13 marginal energy rates.

14 MR. BALDUCCI: Anthony Balducci with NEMA.

15 Along those same lines with marginal rates,  
16 are they going to be used across all the rulemaking  
17 that is in process? Specifically, ballast.

18 MS. NADER: Could you repeat the question,  
19 please?

20 MR. BALDUCCI: For marginal energy rates,  
21 people have mentioned commercial as well as industrial  
22 and residential. I know this is only residential. Is  
23 DOE planning on using marginal energy rates for the  
24 other rulemakings, specifically the ballast rulemaking?

25 MR. MARGOLIS: This is Eugene Margolis. We

1 are here on clothes washers.

2 MR. BALDUCCI: I understand that, Gene.

3 MR. MARGOLIS: And that is what --

4 MR. BALDUCCI: But, this is more --

5 MR. MARGOLIS: But, the answer was yes for  
6 clothes washers. When we go to another rulemaking,  
7 then we will talk about the products at that time.

8 MR. BALDUCCI: Well, I am just, this is more  
9 of a general across the board thing. It is not product  
10 specific marginal energy rates. That is why I have  
11 that concern. I think the Department should be  
12 consistent in their approaches with each rulemaking.  
13 And that is my only comment.

14 MR. MARGOLIS: Okay. Thank you for your  
15 comment.

16 MR. MCMAHON: Okay. The next slide is how do  
17 we extract the consumer marginal energy rates. Each  
18 sample building has a baseline energy use and can be  
19 assigned a tariff. We will calculate monthly energy  
20 bills for each of these households. These are  
21 baseline, without new standards. Then calculate annual  
22 energy savings due to standards. Desegregate those  
23 annual savings across the month, this is going to be  
24 very important for some products more than others. At  
25 this point I don't know the extent to which there are



1 seasonality in clothes washer usage, but we intend to  
2 research that.

3 Calculate the monthly energy bills for the  
4 sample, with standards, and have a parathetical here.  
5 We are aware that some customers have hourly time of  
6 use rates. It is a very small sample of the  
7 population, but there are some. In those cases, we  
8 will need to go to something more like hourly profiles  
9 of energy consumption. And we are planning to do that  
10 where necessary.

11 Finally, we will use the sample marginal  
12 rates as estimates of the national marginal and  
13 calculate the bill savings.

14 The question has arisen about the data  
15 sources. We have purchased a data source, a database  
16 called MAISY, M-A-I-S-Y. You can find information on  
17 the web at [www.Maisy.com](http://www.Maisy.com). This is not a commercial,  
18 just trying to provide the information. This is a data  
19 set that was developed by Jackson and Associates in  
20 North Carolina. It comprises over 90,000 commercial  
21 customers and 60,000 residential customers. These are  
22 stratified by state. And it provides energy related  
23 customer characteristics. There are also household  
24 load profiles in this database.

25 The database was built up by Jackson

1 Associates starting with the EIA surveys, the RECS and  
2 CBET surveys. And then bringing in city and county  
3 databases as well as census information. And there is  
4 some information on the web site. And we can refer you  
5 to Jackson Associates for more information. And the  
6 TSD will describe how we utilized this data.

7 The second set of -- Glenn?

8 MR. SCHEEDE: I visited the MAISY website and  
9 there is relatively little information there that would  
10 give one comfort in knowing how the data are really,  
11 where they come from and again, their  
12 representativeness, whether, the reliability and how  
13 they are put together. There is very little  
14 information there. So, what you would be forcing  
15 interested parties into doing is buying the database.  
16 And I don't think that is an acceptable way for DOE to  
17 proceed. If DOE plans on using this data, they should  
18 make it available in detail, so it can be reviewed by  
19 interested parties, particularly those of us who don't  
20 have access to taxpayer dollars, to fund our activities  
21 or to, all the money that Earl Jones has.

22 MR. MCMAHON: Let me respond to that.

23 MR. JONES: Thank you. I hope, Jim, you  
24 will respond on G.E., too.

25 MR. MCMAHON: I am not going to respond on

1       behalf of Earl. I don't know how much money he has.

2               On behalf of why we did this, in the past we  
3       have used the RECS data, which you are familiar with,  
4       Glenn, and you have your own concerns about. Given the  
5       importance of trying to get this rulemaking out without  
6       undue delay, it did not seem wise to have the  
7       Government devise a national survey that is 10 times as  
8       big as the existing one and to go out and do that on  
9       public dollars, when there is a commercial product that  
10      is available, that is used by a very large number of  
11      utilities. And I can give you a customer list, if you  
12      would like, of people who are using this database.

13             It seemed prudent to purchase this database  
14      as a commercial product. But, since it is a commercial  
15      product, I can't give the entire database to you,  
16      obviously. It is a commercial product. So, I am sorry  
17      that we can't do that, but I am happy to answer your  
18      questions about the contents of the database. I just  
19      can't give away a free commercial product that they  
20      have for sale.

21             Earl, did you want to respond on your behalf?

22             MR. JONES: Well, actually, no, actually, I  
23      don't. My money is all committed.

24             But, I did want just pursue this particular  
25      question on the statement. Now, if indeed DOE is going

1 to be relying upon these data, is there no obligation  
2 to make it available?

3 MR. MCMAHON: I will turn to DOE for the  
4 answer to that.

5 MR. MARGOLIS: We have not investigated that.  
6 We will and report back at the next committee.

7 MR. JONES: Yes. Thank you, Gene. Because I  
8 do understand Jim's point about not wanting to reinvent  
9 the wheel if there is a good data source out there.  
10 But, by the same token, if that is what you are  
11 adopting, then it seems to me that you really should  
12 make it available.

13 And that really brings back the other  
14 question I wanted to ask Bryan. It is my understanding  
15 that there was a recommendation for a, well, at least  
16 to me, a more simple, simplified approach to this  
17 issue. Which was proposed by the Advisory Committee.  
18 Which I didn't understand to involve pulling together a  
19 new data source here. But, a very simple way of taking  
20 out fixed costs. And I guess my question is what is  
21 the, where does that stand in this rulemaking? What  
22 are you making of that recommendation? Is this an  
23 alternative that recommendation or indeed they make two  
24 recommendations?

25 MR. BERRINGER: Based on the Advisory

1 Committee, their recommendation, that came from Dan,  
2 was to use the marginal energy rates, which are being  
3 developed for this rulemaking. The fixed costs were  
4 talked about in the letter that Dan Ranker had  
5 addressed and we were not going to pursue without fixed  
6 cost. We are looking at, as far as marginal energy  
7 rates, some other possible alternatives for  
8 information.

9 MR. MCMAHON: If I could supplement that  
10 answer? If I may. My understanding of what the  
11 Advisory Committee recommended was that marginal energy  
12 rates be used. And that the average less fixed costs  
13 be used as a temporary stock gap until the marginal  
14 rates were developed.

15 MR. JONES: Okay. Then that leads to my next  
16 question, then.

17 MR. MCMAHON: So, the intention is to not  
18 waste resources on the temporary stock gap, but to go  
19 and solve the problem.

20 MR. JONES: Okay. I understand. What  
21 process, what was then used to come up with the life  
22 cycle costs here?

23 MR. BERRINGER: Full cost.

24 MR. JONES: Full cost. So, you went with, you  
25 didn't go with the temporary stock gap either, then,

1       for that purpose?

2               MR. MCMAHON: In the March workshop, both the  
3       average price and the average less fixed were  
4       presented. In the documentation here, only the  
5       average was presented because in the interim the  
6       Department had decided that they were not going to use  
7       the average minus fixed in future.

8               MR. JONES: So, when will we have an  
9       opportunity to see these numbers recasted with data,  
10      better data from one source or another, or calculate  
11      one way or another?

12              MR. MCMAHON: When the marginal rates are  
13      developed, these will be fed into life cycle cost for  
14      the next set of calculations.

15              MR. JONES: And that, and that, we have no  
16      timetable for that, is what you are saying?

17              MR. MCMAHON: Bryan has a timetable.

18              MR. JONES: Oh.

19              MR. BERRINGER: Yes, we are looking at in the  
20      March time frame, getting the results as far as  
21      marginal energy rates, so, you know, in the, probably a  
22      data will be available like say April, May time frame.

23              MR. JONES: Okay. Thank you.

24              MR. BERRINGER: But, that is our next step to  
25      use the marginal energy rates.

1                   MR. MCMAHON: If I could address the issue of  
2                   the availability of data. One thing that we thought  
3                   about doing and we have had preliminary conversations  
4                   with Jackson Associates about this, is to develop a  
5                   national subset, so not his full data set of 60,000  
6                   households, but rather something like five to ten  
7                   thousand households that are a national sample, without  
8                   all of the detail that is in his data set, but only the  
9                   relevant variables used in this rulemaking and make  
10                  that available. That is, I can't promise yet that we  
11                  are going to do that, but we are in negotiations to  
12                  make that available.

13                 MS. NADER: Okay. At the mike?

14                 MR. NEAL: Yes, this was the previous slide,  
15                 you stated about whether season had anything to with  
16                 the normal load. I would think that it may from a  
17                 practical standpoint being that you wear heavier  
18                 clothing in a cold climate or colder season. So, that  
19                 may be a factor.

20                 MR. MCMAHON: Okay. Are you aware of any  
21                 data sources on that?

22                 MR. NEAL: No, I am not.

23                 MS. NADER: Could we have your name, please?

24                 MR. NEAL: Brian Neal.

25                 MR. ECKMAN: Tom Eckman, Northwest Power

1 Plant Council.

2 We have got regional data at the hourly  
3 level.

4 MS. NADER: Thank you. Steve Rosenstock.

5 MR. ROSENSTOCK: Steve Rosenstock, EEI.

6 Since MAISY is a commercial product, I mean,  
7 it doesn't, it doesn't seem, I mean, if I was selling a  
8 product, I wouldn't want DOE to give it to everybody  
9 else, all the stakeholders. That is kind of you are  
10 hurting your sales there. Maybe some extracts might be  
11 of use, you know, that Jackson Associates would agree  
12 to, just to show some of the extracts for a limited  
13 sample, that they are not, you know, giving away the  
14 store as it were for their database. But, you know,  
15 you were saying five or ten thousand, that is, that is  
16 fine, it almost sounds like overkill just, I mean, I  
17 would say work with the vendor on that, that whatever  
18 they feel comfortable with in providing, I think is a,  
19 would be reasonable. Or you could also say, I don't  
20 know, just if DOE here would have the complete set,  
21 that people if they wanted to look at it here on site,  
22 they couldn't obviously take away. They could view it  
23 or look at the database here, just for their, you know,  
24 again preserve confidentiality and that way you are  
25 not, you know, no one is getting a free software



1 product, basically.

2 Also I wanted to, I am glad Mr. Jones brought  
3 it up, in terms of using the average cost in the  
4 technical support document. The Advisory Committee,  
5 you know, said, take out the fixed cost as an interim  
6 step. And what concerns me is that in the technical  
7 support document as well as the announcement in the  
8 Federal Register, that since fixed cost were not taken  
9 out, it, it gives the impression, it leads to, there  
10 could be some vastly different numbers that could  
11 happen when you get the NOPR stage. I mean, we have  
12 the conclusions here, what appear to be conclusions.  
13 And I don't want to, I want to make sure that that  
14 people realize that these are just preliminary numbers  
15 from a preliminary analysis, that NOPR numbers, the  
16 final modified energy factor, might be completely  
17 different based on the new data that DOE is going to  
18 get. Have I mischaracterized that?

19 MR. BERRINGER: No.

20 MR. ROSENSTOCK: Thank you.

21 MR. SCHEEDE: Glenn Scheede, again. I just  
22 wanted to disagree with Mr. Rosenstock on being very  
23 comfortable with data that happens to be available from  
24 a commercial source. There are lots of products  
25 available from commercial sources that are very good.

1       There are others that aren't worth a darn. And just  
2       having you list people who have brought them, and I  
3       recognize that is on the MAISY website. I have worked  
4       for lots of different organizations, who buy lots of  
5       products, data products, some you use, some you don't.  
6       But, you need to be able to evaluate them. And just  
7       saying they are commercial product, doesn't carry any  
8       weight. You need to find out how the product was  
9       developed. And I am just not nearly as comfortable  
10      with saying, fine, let's grab this as Mr. Rosenstock  
11      is.

12                   MS. NADER: Thank you.

13                   MR. JONES: Earl Jones, G.E. here.

14                   Just to comment on both, on two things. One,  
15      it seems to me that Jim is proceeding down the right  
16      road by trying to come up with a, something from these  
17      people who got data, that could fit the needs here and  
18      be made available. And then it would seem also that  
19      you would be in the position, Jim, to explain or defend  
20      or at least help us better understand exactly what was  
21      in there whenever the time might come that we have  
22      another meeting.

23                   And the other point was that having done  
24      these calculations with the average costs in there, I  
25      guess I wanted, it raises questions and if one were

1 concerned about, let's say the bona fides of this  
2 proceeding, which I am not, you would wonder why these  
3 numbers were put in there. What is the objective of  
4 doing that? I mean, you either are raising false  
5 expectations or you are trying to leverage people into  
6 a result which they are otherwise not prepared to  
7 accept. I really would caution you to, against doing  
8 that in the future and say, if you committed to a  
9 process, which says you are going to take certain costs  
10 out, then produce numbers which are more realistically  
11 based upon that commitment, as opposed to putting up  
12 strawmen, which can only fuel controversy in this  
13 rulemaking. I just don't understand why that was done.

14 MS. NADER: Thank you for those comments. I  
15 think we should let Jim continue his presentation and  
16 see if some of the questions aren't answered in his  
17 presentation.

18 Go ahead, Jim.

19 MR. MCMAHON: Okay. I was describing the  
20 databases. The first one is the buildings database.

21 The second is the tariffs. We are gathering  
22 information from several sources. We have perused the  
23 websites of the trade associations that are listed here  
24 for the utilities. We have looked at commercial  
25 vendors of data sets of tariffs. Public utility

1 commissions have this information. It is very  
2 laborious to go and retrieve it, but it does exist in  
3 the public, in publicly accessible form. And in some  
4 cases we are contacting individual utilities.

5 The third data set is monthly end use load  
6 profiles. Which we are getting from the published  
7 literature. There was quite a bit of work done,  
8 starting in the 1970s and continuing in some places  
9 today. And there are still some utilities studies  
10 available. And I welcome the offers of data from the  
11 Northwest and anywhere else.

12 Okay. Now let me come back to this issue of  
13 average minus fixed costs. This is not in your  
14 handout. It was something that I put together this  
15 morning. This is representation of estimates of  
16 electricity price, using one particular tariff from one  
17 particular utility. And I am trying to illustrate why  
18 it made sense to drop the average minus fixed cost in  
19 this example. What you are seeing here on the vertical  
20 axis is the cost per kilowatt hour. The scale goes from  
21 zero to 30 cents. And on the horizontal axis kilowatt  
22 hours per month, from zero to 600 kilowatt hours.  
23 There are three lines drawn here. The one that is in  
24 blue, that looks like two rectangles is labeled  
25 marginal price. This is actually the tariff schedule,

1       12 cents a kilowatt hour in this range, up to 273 and  
2       14 cents a kilowatt hour above 273 kilowatts hours.  
3       So, if you all go home and look at your utility bills,  
4       you may see something that has a block structure,  
5       something like that, with different prices.

6               The green line coming down here is the  
7       average. This particular utility has a fixed charge.  
8       And so you are going to pay that charge whether you use  
9       energy or not. So, your first kilowatt hour is very  
10      expensive, because you are paying \$2.00 a month,  
11      whether or not you use electricity. After that, as you  
12      use more electricity, it averages in and you begin to  
13      approach the 12 cents a kilowatt hour, then step up to  
14      14 cents and this slopes upwards. So, this is what the  
15      average price would be as a function of kilowatts hours  
16      per month.

17             Average minus fixed, if we take off that  
18      \$2.00 minimum charge, it looks like this. So, it  
19      starts being very low. There is a small anomaly here  
20      because it is a complex tariff and there is a three  
21      cents per kilowatt hour basic fee that shows up for  
22      very low consumption. But, basically, without the  
23      fixed charge, you pay very little at the low end. You  
24      come up to 12 cents and eventually start moving.

25             The point of this is that the average is

1 sometimes high and sometimes low. But, it is a better  
2 representation of the marginal, than the average minus  
3 fixed, which is always low. Now, I understand this is  
4 one tariff and you can come up with other tariffs, but  
5 we have looked at a number of them, and we believe that  
6 the average minus fixed is bias to low. And that is  
7 why the average was a better representation for this  
8 one case as a stock gap until we can get to the  
9 marginal prices, themselves.

10 MS. NADER: Steve?

11 MR. ROSENSTOCK: Steve Rosenstock, Edison  
12 Electric Institute.

13 EEI collected data as well as Oregon Energy  
14 Office, that I think we showed, especially, well, among  
15 investment utilities, the difference was the fixed cost  
16 were about seven and a half percent. And among  
17 municipals and coops, at least of some of the limited  
18 data that I saw, some of the values were higher because  
19 you have fewer customers for distribution line mile.  
20 And since, you know, municipals and coops are about 25  
21 percent of the population. Since we are going to  
22 marginal energy rates for the next round of the  
23 analysis and I know this is preliminary, I still, the  
24 Advisory Committee still said as an interim step, that  
25 we agreed that to take out as the interim step, take

1 out the fixed cost where we could. So, I am just a  
2 little concerned and I know you examined the data but I  
3 still think that you are kind of skirting around what  
4 the Advisory Committee said. That is kind of my  
5 interpretation of it. But, since it is preliminary,  
6 it, I am okay with it right now. But, I am just saying  
7 for the future, if for whatever reason, depending on  
8 the timetable, that you don't have all the marginal  
9 energy rates, I would say that that it would be a  
10 better procedure to take out the fixed costs,  
11 otherwise, again, in my opinion that some of the  
12 economics would be, the economics might be a little bit  
13 overstated. Thank you.

14 MS. NADER: Glenn Scheede.

15 MR. SCHEEDE: Glenn Scheede, again.

16 Since you have already done this analysis on  
17 some utilities, could you bundle that information up  
18 and make it available to us, so we can see which  
19 utilities you looked at and what the results were, the  
20 study that you said you just, have already done to look  
21 at marginal versus average rates?

22 MR. MCMAHON: I can provide you, not at this  
23 moment, but I can provide you with information about  
24 what utilities we have contacted and how many tariffs  
25 we have from those utilities.

1           In terms of showing you quantitative results  
2       like this for all, that is not possible at this time,  
3       because --

4           MR. SCHEEDE: Just the ones that you have  
5       looked at to reach the conclusion that you did. You  
6       said you reached a conclusion that there were enough of  
7       them where the marginal rates were higher than the  
8       average rates. That you thought that was not the right  
9       way to go. So, I say, can we just see the data, see  
10      the analysis you have done, since it is already done,  
11      just bundle it up and let's see it and see what --

12          MR. MCMAHON: I am showing you an example,  
13      Glenn. I would be happy to --

14          MR. SCHEEDE: No, I don't mean the example. I  
15      mean, the whole works. The one example doesn't provide  
16      the basis for you to reach a conclusion, I assume.  
17      Because you said you have done it on a number of  
18      utilities.

19          MR. MCMAHON: I have looked at a number of  
20      tariffs and similar result. It is very clear that when  
21      you subtract a fixed charge from the average, you are  
22      going to get a lower number. It is very clear from  
23      what Edison Electric Institute did, that marginal rates  
24      maybe higher or lower than average. They are not  
25      consistently lower. And, therefore, the average minus



1 fixed charge is bias low. To the extent that we have  
2 documentation written up, I am happy to provide to you,  
3 however, our resources right now are dedicated to  
4 developing the marginal rates. And I really don't have  
5 the time or the resources to write another report in  
6 the interim.

7 MR. SCHEEDE: I wasn't looking for any new  
8 analysis, just the EEI provided a whole lot of data and  
9 you said you came up with data that suggested that is  
10 bias on the low side. What I am saying, I want to see  
11 the data that you have already put together, just make  
12 that available to us, not, it doesn't have to anything  
13 fancy, just let's see the data.

14 MR. MCMAHON: Okay.

15 MS. NADER: Okay.

16 MR. MCMAHON: It won't be fancy.

17 MS. NADER: Steve Rosenstock.

18 MR. ROSENSTOCK: Steve Rosenstock, EEI.

19 Going into the technical support document, it  
20 talks about, it is Chapter 7 talking about the prices  
21 and the approach, this is for both electricity and  
22 natural gas. The RECS 1993 data is used and then to  
23 adjust it to 1997 dollars and please correct me if I am  
24 misstating this, it is the values from 1993 were  
25 multiplied by the CPI, Consumer Price Index, Global

1 U.S. Consumer Price Index to bring it, that is part of  
2 the equations, so it is those values times the '93 to  
3 '97 CPI. Then it is multiplied again by the, I will  
4 say an energy price scale for that same time period.  
5 Is that, am I stating that correctly?

6 MR. MCMAHON: That is correct.

7 MR. ROSENSTOCK: Okay. I am just kind of  
8 curious, I am having, I guess I am having a little  
9 trouble with that because let's just use, it is a  
10 dollar per unit of energy in 1993 and the price didn't  
11 change in 1997. So that, the energy scale, there is  
12 1.0, but the price, the Consumer Price Index went up 10  
13 percent. So, it would be 1.0 times 1.1 for Consumer  
14 Price Index, times 1.0, which would mean that the '93  
15 price would be shown as 1.1 in the graph, when really  
16 you have other data that shows that was actually 1.0.

17 MR. MCMAHON: No, that is not what happened.  
18 What we did was replicate the 1997 prices. The  
19 adjustments are there to make sure that in 1997 we are  
20 characterizing the energy price correctly, not using  
21 1993 values.

22 MR. ROSENSTOCK: Okay. But, but, since there  
23 is census data on the actual energy prices, you know,  
24 whether it is electricity, it might be electricity and  
25 natural gas, and oil. I know, I am pretty sure the

1 Commerce Department does have some energy, you know,  
2 they do food and they also do energy. They break out  
3 oil from electricity and gas. Is that CPI component  
4 really needed in there to do that adjustment? That was  
5 just, I am just kind of curious about that.

6 MR. MCMAHON: You are proposing alternative  
7 methodology where we do one scaling. We take 1993  
8 prices and '93 dollars and scale 1997 and 1997 dollars.  
9 But, we didn't separate that into two components. But,  
10 you have the same result.

11 MR. SCHEEDE: Glenn Scheede, again.

12 Electricity prices between '93 and '97 did  
13 not increase at the same rate as CPI. If you will look  
14 in monthly energy reviews, you will see EIA has a table  
15 in there that compares the two. Electricity prices  
16 didn't go up as far, as far as CPI. So, it is not a  
17 correct adjustment.

18 MR. MCMAHON: I agree with you, it did not.  
19 And the scale in 1997 dollars, from '93 to '97 prices  
20 accounts for that.

21 MS. NADER: Okay. I am going to ask that we  
22 move on. If we have additional time, at the end of the  
23 afternoon, we can return to some of these subjects. We  
24 have a number of presentations yet.

25 MR. MCMAHON: Okay. So, Peter, do you want

1 to?

2 MS. NADER: Oh, you are through.

3 MR. MCMAHON: Yeah, we are going to do that  
4 water rates, next.

5 MS. NADER: Thank you.

6 Peter Biermayer, also of Lawrence Berkeley  
7 Lab.

8 PRESENTATION BY PETER BIERMAYER:

9 MR. BIERMAYER: Okay. I am going to talk  
10 about the analysis of water and waste water rates. By  
11 waste water, we mean sewerage basically.

12 Okay. We had two objectives in this task.  
13 And one was to find what the distribution of current  
14 rates are, so we can have a price for the current rate  
15 of water. And also to see how it escalates.

16 So, to get the distribution, first of all we  
17 used Raftelis data and that is the latest survey data  
18 that we know of. And it was taken in 1998. And we  
19 converted it to 1997 dollars. And what we did with  
20 that data is we took the cost of water for a thousand  
21 cubic feet and subtracted out the base charge for zero  
22 consumption. And so, that is, then divided that by the  
23 thousand cubic feet, so we get dollars per cubic feet.  
24 And that is sort of a marginal rate. It is different  
25 than a marginal rate than Jim talked about in the way

1       it was done, but it is, that was the intent.

2               We also corrected using all urban consumer  
3       price index to convert to 1997 dollars, since all the  
4       rest of the analysis is in 1997 dollars. And this data  
5       was going to be used in two places. One was in the LCC  
6       spreadsheet, where we would use the distribution. And  
7       also in the NES spreadsheet, where we would use a  
8       single value, but it would be a marginal rate, a single  
9       marginal rate cost of water.

10              The database for the distribution or the  
11       number for the current rate was based on 115 service  
12       areas, and service areas pretty much correspond to  
13       cities. They represent population of 56 million. And  
14       that is people, not households. And to give you an  
15       idea of what that number is representative of, 86  
16       percent of the country is on a water utility and 77  
17       percent have a waste water utility. Meaning, the rest  
18       have, are connected to private wells, septic tanks.

19              This chart here shows us the, it is just a  
20       graph of the database I was describing. Basically I  
21       have, on this side is just the weighting. We weighted  
22       all these, these, this price data according to the  
23       population served. So, you can see over here, we have  
24       New York City, I believe this is Detroit, that is L. A.  
25       And it shows you the distribution of water rates,

1 marginal water rates.

2 MR. JONES: Peter, Earl Jones here.

3 How did you select these cities?

4 MR. BIERMAYER: They were on the database, put  
5 together by an organization, by Mr. Raftelis.

6 MR. JONES: Who is he?

7 MR. BIERMAYER: He is, he is well known in the  
8 water business. He is the only person I know of that  
9 puts together a comprehensive survey on water. And --

10 MR. JONES: So, it is not population weighted  
11 or --

12 MR. BIERMAYER: This is -- for population.  
13 What he did is he asked them what the number of people  
14 each water utility served, and then these were weighted  
15 by the population. That is what the wide axis shows is  
16 distribution.

17 MR. JONES: Yeah, maybe I asked the wrong  
18 question. What I meant was, what percent, were the  
19 selection of 115 cities based in any respect on their  
20 populations and what that represented by way of the  
21 U.S. population? Or is it just 115 cities for whatever  
22 reason?

23 MR. MCMAHON: Earl, maybe I can help. This is  
24 Jim McMahon.

25 We contacted the Trade Association, the

1 American Waterworks Association and asked them where  
2 the best data was. They referred us to Mr. Raftelis,  
3 who has a consulting organization. And this is the  
4 most comprehensive data set that exists. These are the  
5 only 115 cities that are surveyed. So, there is no  
6 selection here. We took all of the data that was  
7 available.

8 MR. JONES: Okay. Thank you.

9 MR. MORRIS: This is Wayne Morris of the AHAM.  
10 Jim, when you look at this data from  
11 Raftelis, did he not break this down into, I believe  
12 large cities, medium cities and small cities? Some  
13 kind of a distribution in which he had a selection of  
14 some of the largest cities in the U.S.A., some of the  
15 medium sizes and some of the smaller. I thought that  
16 that is what I remember.

17 MR. MCMAHON: This is the full set. There are  
18 large cities, medium cities and small cities included.  
19 And you can see that in the population distribution by  
20 the height of bar.

21 MR. BIERMAYER: I can get you the exact cities  
22 if you are interested. It is just a list of cities and  
23 we called Raftelis and he said it was okay to share it  
24 with whoever wanted it.

25 MS. NADER: Glenn Scheede.

1           MR. SCHEEDE: Two questions. Will the data be  
2       made available so that we can see them?

3           MR. BIERMAYER: Yes.

4           MR. SCHEEDE: The detailed data?

5           MR. BIERMAYER: Yes.

6           MR. SCHEEDE: Okay. Second question. To  
7       what extent are the data for the 115 cities and the 56  
8       million people representative of the nation as a whole?

9           MR. BIERMAYER: Well, 2.3 people per  
10      household, would give you the percentage. Let me see.  
11      It is about 22 percent of the national population.

12          MR. SCHEEDE: Yes, I can do that arithmetic,  
13      too. But, to what extent do know these 115 cities  
14      represent, are representative of the nation as a whole?  
15      Particularly, in rural areas where people don't rely on  
16      municipal sewer and water?

17          MR. BIERMAYER: Yeah, at this time we don't  
18      have information on what the cost is if you have a  
19      private well and a private septic tank system. From  
20      people that I have talked to in the water business,  
21      they tell me that if given a choice, people would, will  
22      hook up to city water and city sewerage, meaning there  
23      is some benefit to having that rather than having your  
24      own well and pump. I don't have exact numbers on what  
25      it costs, but there are costs of course. You know, you



1       have to have your septic tank pumped out, you have to  
2       maintain your pumps. There are costs to having a  
3       private system. We don't have detailed data on that.  
4       We expect it to be higher.

5               MR. SCHEEDE: Do you expect to get those data,  
6       so that we know what the --

7               MR. BIERMAYER: We intend to try and get some  
8       information on that, yes.

9               MR. SCHEEDE: Because this seems like a bias  
10       sample to metropolitan areas, and large, and I don't  
11       know whether they large or not.

12              MR. BIERMAYER: Yes, what the water experts  
13       tell me is that actually the water prices are less  
14       expensive in the large cities. So, if you are saying  
15       that my prices are too low, you are probably correct.

16              MR. SCHEEDE: No, I don't know whether they  
17       are too low or too high. I am looking for the data so  
18       I can see.

19              MR. BIERMAYER: Okay. If anybody has data on  
20       that, please send it to me. We are trying to get that.

21              MR. SCHEEDE: Well, no, no, let's not try to  
22       shift the burden here. Obviously --

23              MR. BIERMAYER: No, if it is possibly,  
24       possible to get it, we will get it.

25              MR. SCHEEDE: Okay. But, it is DOE's

1 responsibility to collect and provide the data, not  
2 interested parties to collect it.

3 MR. BIERMAYER: I am just saying, we will  
4 welcome your contributions.

5 MS. NADER: Steve Rosenstock and then over  
6 there, and then I will suggest that Peter continue with  
7 his presentation.

8 MR. ROSENSTOCK: Steve Rosenstock, Edison  
9 Electric Institute.

10 These are just a couple of quick questions.  
11 These are residential rates only, they are not small  
12 commercial or anything.

13 MR. BIERMAYER: Right, residential.

14 MR. ROSENSTOCK: Residential.

15 Number two, did any of them, just out of  
16 curiosity, did any of them have any sort of block  
17 rates, either increasing or decreasing?

18 MR. BIERMAYER: Yes, they did.

19 MR. ROSENSTOCK: Okay.

20 MR. BIERMAYER: We have other data on that. I  
21 think about, I don't know the exact numbers but the  
22 most popular for water is the inclining block rate,  
23 with a declining block rate being second and then a  
24 flat rate. And with sewerage it is mostly, I think it  
25 is 80 percent flat rate.

1           MR. ROSENSTOCK: So, when, so when you created  
2       these values, were you looking at a, were you looking  
3       at the first block or second block, you know,  
4       regardless of what it was? I am just kind of --

5           MR. BIERMAYER: No, we, I don't have the  
6       breakdown on the blocks. It was just for one thousand  
7       cubic feet, what were the costs.

8           MR. ROSENSTOCK: Which is the average --

9           MR. BIERMAYER: Right.

10          MR. ROSENSTOCK: Per month.

11          MR. BIERMAYER: Right.

12          MR. ROSENSTOCK: Okay.

13          MS. NADER: Okay. Question over there?

14          MR. STEVENS: Charlie Stevens from the Oregon  
15       Energy Office. I would just like to take issue with  
16       Mr. Scheede here, momentarily. I think DOE has  
17       collected the only data there is. I have been out  
18       there collecting some of this data myself. I don't  
19       think it is necessarily incumbent on DOE to do more  
20       than collect all the data there is. I think it is  
21       incumbent upon stakeholders who find issues with it, to  
22       put some concrete reasons on the table as to why this  
23       data is inadequate and usually that is done by having  
24       some other data that shows some other case. So, in the  
25       absence of that I think they have done a pretty good

1       job of gathering data.

2                   MS. NADER: Okay.     Thank you.

3                   MR. SCHEEDE: Glenn Scheede, if I were  
4       subsidized by DOE to collect data, the way some of the  
5       state energy offices are, perhaps I could do it.

6                   MS. NADER: Thank you.

7                   Peter, please continue with your  
8       presentation.

9                   MR. BIERMAYER: Okay.     The second objective  
10       was to determine a price escalation for water.   And  
11       these were the first of the data we went to look for,  
12       for data in for both the cost and for the escalation.

13                   We got some data from American Water Works  
14       Association.   As I said before, got information from  
15       Raftelis, Al Dietemann, who is here, did some work in  
16       1994, giving population weights to other data that was  
17       collected from Raftelis and Ernst and Young.   And what  
18       we did is because each of these surveys didn't always  
19       have consistent cities, the same cities weren't  
20       surveyed in every survey, what we did is we called up  
21       cities to fill in missing gaps.   And what we came up  
22       with for 1986 and 1998 was 38 cities where we can have  
23       the same cities both in 1986 and 1998, so we can make a  
24       comparison.

25                   We also tried to, we called utilities and we

1       asked them what they forecasted for the future? We  
2       didn't get a whole lot of response. We got six people  
3       who responded, utilities that responded on that. And  
4       they kind of, it wasn't very consistent data.

5               Also we, there was some comments to DOE,  
6       which I will talk about later, regarding the escalation  
7       of water prices. And then we also have opinions of  
8       experts from Raftelis, Al Dietemann, American Water  
9       Works.

10              This is a map that shows the cities of the  
11       38, of 38 cities that we used in predicting a price, or  
12       looking a historical trend for price escalation of  
13       water. So, you can see they are distributed around the  
14       United States.

15              Okay. This chart here, shows the, it is a  
16       bar chart one, color is 1998. That tends to be the  
17       higher bar chart, showing that it is more expensive  
18       than in 1986. This is also in 1997 dollars, corrected  
19       using CPI, Consumer Price Index.

20              Okay. This chart here shows the 38  
21       individual cities and the distribution of their percent  
22       change in water prices from '86 to '98. So, you can  
23       see there is a few that are negative, there are some on  
24       the right. And these are individual cities, and it  
25       shows you basically the population.

1 Steve?

2 MR. ROSENSTOCK: Steve Rosenstock, EEI.

3 On this chart it says median of 1.86 percent.

4 That is over years without any CPI adjustments, right?

5 That is just from, you know --

6 MR. BIERMAYER: No, that is, everything has  
7 been adjusted to 1997 dollars.

8 MR. ROSENSTOCK: But, the --

9 MR. BIERMAYER: That represents unweighted.  
10 Those are unweighted figures.

11 MR. ROSENSTOCK: Okay.

12 MR. BIERMAYER: That is an unweighted average.  
13 And, well, the median is just of those cities. It is  
14 just, you know, it doesn't need to be weighted.

15 MR. ROSENSTOCK: Right. But, what I am saying  
16 is that it was, you know, it was like \$4.00 one year  
17 and then \$5.00 10 years later and you are just the  
18 annual percentage. Did you assume --

19 MR. BIERMAYER: Oh, right.

20 MR. ROSENSTOCK: Did you assume a constant  
21 slow between the two data points?

22 MR. BIERMAYER: No, what we did is, we used  
23 the concept of a compound interest basically. Where  
24 if, we looked at the, let's see if I can explain this  
25 without paper.

1                   We looked at the numbers in 1986, the cost in  
2                   1986 in 1987 dollars, I mean, 1997 dollars, and looked  
3                   at the cost in 1998, and converted that to 1997  
4                   dollars. Then we used an equation showing that, well,  
5                   basically that, what the rate would be assuming they  
6                   had a rate change every year and how that would  
7                   compound. What the equivalent interest rate would be,  
8                   yearly interest rate increase would be if they changed  
9                   the rate every year. And a certain percent rate, to  
10                  get the -- dollars.

11                 MR. ROSENSTOCK: It is derived percentage  
12                 changes.

13                 MR. BIERMAYER: Yes.

14                 MR. ROSENSTOCK: And it is constant, you are  
15                 assuming constant change throughout the 12 years.

16                 MR. BIERMAYER: Yes.

17                 MR. ROSENSTOCK: But, it is still like a one  
18                 percent and then one percent, you know, it is still  
19                 that --

20                 MR. BIERMAYER: It doesn't, as you might  
21                 guess, it doesn't change the same percentage every  
22                 year. This is sort of an average percentage change per  
23                 year.

24                 MR. ROSENSTOCK: But, the first, for the  
25                 original adjustment, from '86 to '97, was again using

1 the Global Consumer Price Index.

2 MR. BIERMAYER: It is all Urban Consumer Price  
3 index.

4 MR. ROSENSTOCK: The Urban, okay, but --

5 MR. BIERMAYER: Which I think is the standard  
6 CPI number.

7 MR. ROSENSTOCK: Okay.

8 MR. BIERMAYER: Okay. So, the results, we  
9 got \$3.20, we converted it to gallons, instead of cubic  
10 feet, \$3.20 per gallon, that is for 1998, Raftelis  
11 data, 1997 dollars, includes water and wastewater  
12 rates, 115 cities. And as I already explained, 56  
13 million people. The escalation rate we got was 3.1  
14 percent real. These are all marginal rates, based on  
15 38 service territories and 27 million people.

16 And how does this compare with the  
17 stakeholders. We have some comments, Whirlpool  
18 mentioned the same people that we got data from. And  
19 made a general observation that prices have been  
20 increasing.

21 ACEEE referred to Osann and Young study.  
22 They also looked at future improvements in  
23 infrastructure required by the government and how that  
24 would affect future prices. And they also did the and  
25 they got a range of 1.1 to 2.7 percent real.



1           Anticipating the question why we got  
2           something different than Osann and Young. Osann and  
3           Young came up with the 2.6 percent real. And the  
4           difference in the analysis there was that we used the  
5           years from '86 and '98. They used '86 to '96. So, we  
6           have one more year's worth of data.

7           We adjusted for marginal rates, and they  
8           didn't. We used 38 cities, and the same cities in both  
9           years. They used a larger data set, Ernst and Young  
10          and Raftelis data surveys, but those surveys don't  
11          always have the same cities every year. So, we want to  
12          make sure we are using the same cities both years.

13          And I guess that is it. Any questions?

14          MS. NADER: No questions? Peter, thank you.

15          MR. BIERMAYER: Thank you.

16          MS. NADER: Jim McMahon is going to --

17          MR. JONES: Well, Earl Jones here. I did have  
18          one question. You said you contacted departments,  
19          water works and to find out what their plans were and  
20          you got responses from six. So, my question --

21          MR. BIERMAYER: Oh, no, the, we called up  
22          utilities and asked them and we had six responses.

23          MR. JONES: Yes, I thought, well, okay.  
24          How does that figure into this analysis?

25          MR. BIERMAYER: We are not using it because

1       there was not much response.

2               MR. JONES: Not enough data.

3               MR. BIERMAYER: But, since how we made the  
4       effort, we were asking them for it and we didn't get  
5       any response, basically.

6               MR. JONES: So, then what assumption do you  
7       make about what happens in the future?

8               MR. BIERMAYER: Three, point two percent, the  
9       3. --

10              MR. JONES: How about infrastructure?

11              MR. BIERMAYER: Oh, about the infrastructure?

12              MR. JONES: Yes. And the cost of that?

13              MR. BIERMAYER: Well, basically we assume  
14       that, you know, it will, the cost of water will  
15       increase faster than the rate of inflation. So, we  
16       didn't, this analysis I did here, was just based on  
17       historical basically. And we got some input from some  
18       of the experts saying that basically they would expect  
19       the price to increase. But, our analysis isn't based  
20       on, is based on just historical cost. It is not based  
21       on future infrastructure costs.

22              MR. JONES: Okay.

23              MS. NADER: Gentleman at the mike.

24              MR. HOLMES: Hi, I am Tommy Holmes, American  
25       Waterworks.

1                   Sorry, more utilities didn't response  
2           directly. But, I can assure you your water bills will  
3           go up in an increasing rate because of a variety of  
4           factors. One we have falling water tables across the  
5           country. Two, we have an aging infrastructure that is  
6           screaming for replacement. And Congress recognized  
7           this in creating the State Revolving Loan Fund, in the  
8           Safe Drinking Water Act. And we have more and more  
9           regulations coming on line. The Safe Drinking Water  
10          Act was last amended in 1996. And those amendments  
11          are, the regulations stemming from those amendments are  
12          just beginning to come on line. Just last week  
13          President Clinton announced the new regulation from  
14          Microbial and Disinfection By-products. And that is a  
15          whole new layer of water treatment to lower your  
16          exposure to bugs, like cryptosperida(ph), and  
17          consequently also lower your exposure to the by-  
18          products from disinfection practices.

19                 Also we have to admit drinking water  
20          utilities are tremendous consumers of electricity. And  
21          in our comments we sent to DOE in 1995, we had a study  
22          saying it was estimated that drinking water utilities  
23          consume seven percent of the nation's electricity. I  
24          would imagine that is pretty conservative nowadays,  
25          especially if you have utilities moving toward

1 ozoneization(ph), reverse osmosis(ph) and  
2 decelerization(ph). Those aren't wide practices yet.  
3 But, even our own backyard, Fairfax County Water is  
4 moving to ozone treatment. So, I think, 3.2 percent is  
5 a good baseline, but I would say it is probably pretty  
6 conservative.

7 MS. NADER: Thank you. Steve?

8 MR. ROSENSTOCK: Steve Rosenstock.

9 Does your organization track it? What has  
10 been happening the last few years, just out of  
11 curiosity, in terms of some of these rates?

12 MR. HOLMES: In rates? You know, we haven't  
13 done a lot of work tracking utilities rates. The  
14 NARORC(ph) has done a lot that stuff. Our concern  
15 mainly has been in water quality and water treatment  
16 and on the legislative and regulatory side. But, we  
17 haven't done a lot of tracking at rates.

18 MS. NADER: Okay. Any more questions for  
19 Peter?

20 MR. DIETERMANN: I have got a follow up to  
21 that. My name is Al Dietermann. I am with Seattle  
22 Public Utilities.

23 For those that don't know George Raftelis is  
24 chair of Rates and Finance Committee for American  
25 Waterworks Association. The references here are tied

1       into the Raftelis survey. He is a private rate  
2       consultant. He doesn't get paid by AWWA to do these  
3       survey work. But, there is a logical tie in there and  
4       he is extremely knowledge individual about rates across  
5       the country for both water and wastewater.

6               MS. NADER: Thank you. Anyone else, for  
7       Peter? Steve?

8               MR. NADEL: Steve Nadel, ACEEE. I am very  
9       glad that DOE and LBL has gone forward and actually  
10      done this analysis. The data we provided before was  
11      saying, was to address the fact that before you assumed  
12      a zero percent escalation, is take the best data that  
13      we could find at that point in time. But, you have  
14      clearly gotten a lot more data. You have done a lot  
15      more to clean it up, and I think it is a pretty good  
16      analysis.

17              The one other thing I would point out is as  
18      you noted the difference between the 2.6 and 3.1  
19      percent, what the differences were, the low end of our  
20      range was based on some of the data from Osann and  
21      Young in terms of future cost. That data is a couple  
22      of years old. And we apply certain assumptions to that.  
23      So, that is not especially rigorous. We supply that to  
24      indicate that there is a great likelihood that that  
25      rates would increase in the future, to argue against

1 the preassumption that rates were going to be flat.  
2 But, I wouldn't read too much in, particularly the  
3 lower -- If someone wanted to look at infrastructure  
4 cost, they will need to do a lot more. They would  
5 first need to update that database and do a lot more  
6 looking into some of the key driving assumptions about  
7 the average life and interest rate and so on, in order  
8 to do that.

9 MS. NADER: Thank you. Thank you, Peter.

10 Jim McMahon is going to talk to us about  
11 energy savings.

12 MR. MCMAHON: So much research, so little  
13 time.

14 MR. JONES: Jim, before we leave the prior  
15 discussion, one more time, if you could. And I  
16 probably missed this and I apologize. But, the 3.1  
17 factor or 3.2 or whatever it was. Peter, is over what  
18 period of time? Is that annual? Is that over the --

19 MR. BIERMAYER: That is average per year  
20 increase from 1986 to 1998.

21 MR. JONES: And how is that number being used  
22 going forward now?

23 MR. BIERMAYER: How is it being used, how?

24 MR. JONES: Yes, going forward.

25 MR. BIERMAYER: Oh, okay. That will be used

1 in the life cycle cost spreadsheet and also the NES  
2 spreadsheet.

3 MR. JONES: Okay.

4 MR. BIERMAYER: National Energy Savings  
5 spreadsheet.

6 MR. JONES: Okay. And how does that number  
7 different from the other numbers which are cited in  
8 your last page? The analysis by the other folks you  
9 looked at. The other data that you came up with, how  
10 does this number compare with others? I see that ACEEE  
11 suggested a number. That is on here somewhere.

12 MR. BIERMAYER: Yes.

13 MR. JONES: Right. And I guess my question  
14 was what other, what other numbers, what other factors  
15 were suggested by these other, by anybody else you  
16 looked at?

17 MR. BIERMAYER: Those, those are the main  
18 people I looked at. There are some other papers on  
19 there that I don't have with me and I don't, I don't  
20 have any of the information with me on --

21 MR. JONES: So, you don't know what the Ernst  
22 and Young suggested or Raftelis?

23 MR. BIERMAYER: Oh, they just, they are in the  
24 business of collecting the surveys. They are not in  
25 the business of --

1 MR. JONES: Making projections.

2 MR. BIERMAYER: Projections.

3 MR. JONES: And so, the only projection that  
4 is in your information or that you had access to, is  
5 the one that Steve provided to you, is that what I am  
6 hearing?

7 MR. MCMAHON: No, there is a misunderstanding  
8 here. Maybe I can help, Earl.

9 MR. JONES: Okay.

10 MR. MCMAHON: Ernst and Young was the firm  
11 that did the surveys from 1986 up until, 1994, is that  
12 correct? And then Raftelis has done the surveys since  
13 then.

14 MR. BIERMAYER: Yes.

15 MR. MCMAHON: Okay.

16 MR. BIERMAYER: I would like to add actually  
17 that Raftelis did this for Ernst and Young before he  
18 opened his own consulting practice. So, it is really  
19 the same person.

20 MR. MCMAHON: So, we have used all of that  
21 data that is available from Ernst and Young and from  
22 Raftelis, from 1986 to the present.

23 MR. JONES: Right, but they are not in the  
24 business of making projections, right? You used their  
25 data to come up with the projection of what the annual



1 inflation would be going forward. Am I --

2 MR. MCMAHON: I believe that Raftelis does  
3 provide, I mean, Al can answer that question whether  
4 George Raftelis provides projections.

5 MR. DIETERMANN: Well, he works for the  
6 individual utilities to forecast based on their  
7 specific geographic and future needs. But, not for the  
8 whole nation.

9 Ernst and Young did provide information in  
10 the '94 study, which showed and tracked their work in  
11 terms of rate increases over time. And that is  
12 available but of course it stops at '94, when their  
13 work was concluded.

14 MR. JONES: Okay. And who is Osann? Who is  
15 Osann?

16 MS. NADER: Al what is your last name?

17 MR. DIETERMANN: Al Dietermann, Seattle Public  
18 Utilities.

19 Osann is a private consultant at this point.  
20 He has done considerable work developing information  
21 associated with the Conberg(ph) Bill, which is before  
22 Congress now.

23 MR. JONES: Okay. And so then my question,  
24 Peter, then is how did you, it says here that these  
25 studies and I guess Osann and Young is another company

1 or consulting firm, is that correct?

2 MR. BIERMAYER: Okay. The reason that was  
3 mentioned is because ACEEE sent a comment to the  
4 Department of Energy, they attached the Osann and Young  
5 report and referred to it. That is why I am comparing  
6 what we did at LBL, with what a comment was that Steve  
7 Nadel supplied.

8 MR. JONES: Okay. So, then tell me again,  
9 what was wrong with Steve's data? I want it on the  
10 record.

11 MR. BIERMAYER: Steve -- Well, I outlined what  
12 we did differently, you know, I don't want to say what  
13 they did was wrong, I am just saying what we did was  
14 different. We used the same cities in '86 and in '98.  
15 And they also, they stopped in the year 1996. We added  
16 one more year, because we used the latest data. We  
17 corrected from marginal rates. They did not correct  
18 for marginal rates. That is what was different, and  
19 that is why we got different numbers.

20 MR. JONES: And that would explain what seems  
21 to me rather substantial difference.

22 MR. BIERMAYER: Yes.

23 MS. NADER: Okay. One more question in the  
24 back. Did I see a hand? No. All right.

25 Carry on, Jim.

1 PRESENTATION BY JIM MCMAHON:

2 MR. MCMAHON: Thank you.

3 Jim McMahon from LBL. I am going to speak  
4 about clothes washer shipments.

5 The approach that I have taken here is to try  
6 to give the simplest approach possible and then add  
7 more factors as it becomes necessary.

8 The major drivers of shipments are two,  
9 replacements of existing clothes washers and new  
10 housing construction.

11 In addition, our economic factors, in  
12 principal washer prices and operating expenses should  
13 influence shipments as well.

14 What I am going to do is deal with the first  
15 two, just by accounting for those without worrying  
16 about the economic factors and then discuss the  
17 economic factors later.

18 New housing construction has been between one  
19 and two million housing units a year in recent history.  
20 Seventy-four to 90 percent of new housing units have  
21 residential clothes washers, depending upon the house  
22 vintage, it has increased over time. Here referring to  
23 the period from 1980 to 1993.

24 We estimate that new housing accounts for  
25 about 1 to 1.6 million residential clothes washers

1 shipped each year. Again, it depends upon the year.  
2 If we compare those numbers to the total shipments,  
3 that is about 19 to 33 percent of annual shipments.

4 In terms of replacements, the life expectancy  
5 of clothes washers, we are taking numbers of 12 to 16  
6 years. This is from Appliance Magazine, September of  
7 1998, with a 14 year average.

8 Using that distribution of lifetime expressed  
9 as a triangular distribution, and the record of  
10 historical shipments, we can calculate the replacements  
11 and we estimate those to have account for 63 to 85  
12 percent of total shipments, depending upon the year.

13 If I add those two together, I can compare  
14 these estimates to the total shipments reported by the  
15 industry. And that is shown on this picture on page  
16 five. The bottom shaded in blue is the replacement  
17 market. The white section is the new housing  
18 construction. And the dashed line is total shipments,  
19 actual. And you can see we get fair agreement from  
20 about 1981 up to the early 1990s, and not as good  
21 agreement the last few years.

22 Expressing that same data a different way, I  
23 turned the actual shipments each year into 100 percent  
24 and we express the replacement and new as shares of 100  
25 percent. Since those estimates are done independently,

1       they don't always add to 100 percent, only when we get  
2       it exactly right. And you can see that depending upon  
3       the year, it is pretty close. The worse error is 11  
4       percent that the estimates differ from the actual.  
5       So, that is fairly reasonable agreement without  
6       accounting for any economic factors.

7               We recognize that there are economic factors.  
8       Purchase expenses for washers are about \$420.00 retail.  
9       These are the same numbers that are used elsewhere in  
10      the analysis.

11             The operating expenses, we estimate average  
12      about \$126.00 per year on a national average. Those  
13      are broken down into energy expenses, of about \$78.00  
14      per year. This includes water heating and clothes  
15      drying, averaged over the different fuel types. And  
16      let me be clear about the average over, we are actually  
17      adding up the individual ones and then dividing by the  
18      population. So, each household has one fuel type or  
19      another. And then we put them together to get the  
20      national totals.

21             The water expenses, we estimate average  
22      \$48.00 per year and that includes both the water and  
23      the wastewater rates.

24             Let me just go to elasticities. In order to  
25      bring the economic factors into the projection of

1 shipments, one way to do that is to express things in  
2 terms of the elasticities.

3 An elasticity is the percent change in a  
4 quantity such as shipments or market share, associated  
5 with a percent change in a driving factor, like the  
6 washer price.

7 Previous research has indicated that for  
8 white goods, specifically refrigerators have elasticity  
9 of about minus .2. That means that a 10 percent  
10 increase in price would cause a two percent decrease in  
11 shipments.

12 Now, we don't have good data on elasticities  
13 for clothes washers. Further analysis is needed and  
14 there is going to be a discussion of the consumer  
15 analysis later this afternoon and how that is going to  
16 be used to attempt to get elasticities.

17 So, the interim results are that using just  
18 the accounting, projections are within 11 percent of  
19 historical total shipments based upon replacements and  
20 new housing construction.

21 The new factors will be to include the  
22 economic factors through the elasticities. To factor  
23 in future energy prices. And the effect of new  
24 standards.

25 The graphic on page 11 shows the projection

1 of clothes washer shipments. It is in the current  
2 spreadsheet. You can find this on DOE's website and  
3 download the shipments spreadsheet. And I put on here,  
4 to the left, the historical data. You will notice that  
5 started the forecast in 1981. This was a way for us to  
6 check whether the model was any good, whether it was  
7 tracking recent history or not. And it tracked the  
8 '80s pretty well. It is a little bit off at the  
9 current time. And then we have the future projections.

10 Conclusions: Accounting for the replacement  
11 sales and new housing provides projections of future  
12 shipments. And I would add that they within about 10  
13 percent of actuals. And economic factors will need to  
14 be addressed and we propose to do that.

15 Questions?

16 MS. NADER: At the mike?

17 MR. THIELE: Terry Thiele with Frigidaire.

18 Did you have any explanation for that 11  
19 percent discrepancy in the most recent year?

20 MR. MCMAHON: I don't. I would have to  
21 speculate. Clearly there is changes in sales from year  
22 to year, due to economic conditions. And we have not  
23 attempted to explicitly model those.

24 MR. THIELE: Have you looked explicitly at  
25 exports?

1                   MR. MCMAHON: Exports are excluded from this.  
2                   This is domestic.

3                   MR. THIELE: All right. Well, but what I am  
4                   saying is when you are taking total shipments, you are  
5                   saying those are domestic shipments, those aren't  
6                   shipments that --

7                   MR. MCMAHON: That is correct.

8                   MR. THIELE: Shipments that involve Canada or  
9                   Mexico or --

10                  MR. MCMAHON: That is right.

11                  MR. THIELE: Okay.

12                  MS. NADER: Steve?

13                  MR. ROSENSTOCK: Steve Rosenstock, Edison  
14                  Electric Institute.

15                  In terms of this also, there is another, in  
16                  the technical support document there is also kind of  
17                  the range of forecast. It is a nice chart showing the  
18                  different ones, page 815. On the projection, I am  
19                  looking at the projection and then I am also looking at  
20                  the National Energy Savings spreadsheets. On, it looks  
21                  like for both base case and the standard case, in terms  
22                  of the column called new shipments, it is a flat  
23                  increasing slope in the spreadsheet versus on this  
24                  projection, a rise and then a plateau or slight  
25                  decrease and then a rise plateau. It looks like as a



1 result, in the spreadsheet by 2030, it shows 9.08  
2 million units versus the projection here of about 8.2  
3 million. I hope I get that right or 8.3 million,  
4 maybe. So, there does seem to be a little bit of  
5 discrepancy in terms of the spreadsheet versus this  
6 graphic here.

7 MR. MCMAHON: Let me, I am not sure about  
8 that. Let me check that with you.

9 MR. ROSENSTOCK: Okay.

10 MR. MCMAHON: The intention is to eventually  
11 substitute it for whatever the best shipment  
12 projections are into the NES spreadsheet, once we have  
13 the economic factors in. So, we will be happy to  
14 correct that if there is an error there.

15 MR. ROSENSTOCK: Yes. Spreadsheet shows flat  
16 increasing, it looks like the same, you know, steadily  
17 increasing slope versus projection of high and then  
18 flat or decline.

19 MR. JONES: Earl Jones here, G.E.

20 So, how will you use, well, first, do I  
21 understand that you are going to get information on  
22 consumer price sensitivity in these, the consumer  
23 exercise that begins this afternoon?

24 MR. MCMAHON: That is correct.

25 MR. JONES: Or at least part of the process.

1 MR. MCMAHON: Yes.

2 MR. JONES: And then how do you bring that  
3 back into, into this shipment analysis?

4 MR. MCMAHON: The intention is from that work  
5 to devise the elasticities, so, the sensitivity to  
6 purchase price and operating expenses. And then to use  
7 those elasticities together with, what the expected  
8 purchase price and operating costs will be in a base  
9 case and a standards case.

10 MS. NADER: Any other questions? Yes?

11 MR. BEST: Richard Best, Whirlpool.

12 Jim, just some clarification here. You know,  
13 some interesting things have been happening in the  
14 markets the last two or three years. And you have  
15 mentioned refrigeration, that you had done a elasticity  
16 study and came out with a minus .2. I think it would  
17 be interesting to note that most people here would  
18 probably have noticed that in the market the real price  
19 refrigerators has been dropping over the past few  
20 years. Although, there has not been a great surge in  
21 volume of those products from the manufacturing side.  
22 And also that, there is something happening within that  
23 scenario in that people may not be actually paying a  
24 lot less, they may be shifting their purchases from  
25 what were lower featured models a few years ago, to

1 higher featured models today at the same price they  
2 would have paid, have paid a few years ago.

3 MR. MCMAHON: Yes.

4 MR. BEST: It is a little complicated to say  
5 that you are really comparing price change versus  
6 selection totally on apples to apples basis here. And  
7 I wonder if that had been considered when you did this,  
8 because certainly there is a lot of strange things have  
9 happened in the last recent period anyway.

10 MR. MCMAHON: Yes, I agree with that comment.  
11 We have not done that kind of a study for clothes  
12 washers as yet. And we are looking forward to seeing  
13 what happens with the consumer analysis. For  
14 refrigerators we did do a retrospective study. It was  
15 published in 1997, looking back to the period from 1987  
16 to '93. The first two sets of National Standards for  
17 refrigerators. And, in fact, the prices did decline in  
18 real terms. And the quality and future of the product  
19 increased. So, I agree with what you are saying. And  
20 those things should be taken into account as best  
21 possible.

22 MS. NADER: Yes.

23 MR. BEE: Are we going to be studying or --

24 MR. BERRINGER: Microphone, please.

25 MS. NADER: Speak up, please.

1 MR. BEE: Tom Bee, Staber Industries.

2 I don't know if you are going to, if I missed  
3 something here, but are we going to go into more detail  
4 on the consumer economic factors that you have on page  
5 seven of your presentation?

6 MR. MCMAHON: Not at this time. The intention  
7 is to discuss that in the consumer analysis later this  
8 afternoon.

9 MR. BEE: Okay.

10 MS. NADER: Okay. Thank you.

11 Anymore questions for Jim? Jim, thank you  
12 very much.

13 MR. MCMAHON: Okay. Did we want to address  
14 the issues of the energy price, future energy prices at  
15 this time?

16 MS. NADER: Bryan, what was your thinking?

17 MR. MCMAHON: Future energy prices, the energy  
18 price scenarios and in the '99. In the context of  
19 National Energy Savings Study.

20 MS. NADER: Okay.

21 Who had questions or comments on the National  
22 Energy Study? Is that what we are talking about now?

23 MR. BERRINGER: Yes.

24 MS. NADER: Yes. Okay. A number of people  
25 raised their hands earlier today as having interest in

1 the subject. Where are you now?

2 MR. ROSENSTOCK: Wait, on the National Energy  
3 Savings spreadsheet. Steve Rosenstock, EEI. Or what,  
4 what topic are you --

5 MS. NADER: Somebody with a mike restate that,  
6 please.

7 MR. NADEL: Bryan was just noting that we had  
8 raised some questions about AEO '98. The AEO '99 has  
9 just come out. We want to take a look at it, but we do  
10 have some concerns that, at least the AEO '98 has  
11 overestimated the decline to be expected in the  
12 residential energy prices that effectively, technically  
13 the same decline in residential, commercial and  
14 industrial prices when most observers, most we have  
15 seen on electricity prices, project greater declines in  
16 the commercial and industrial and smaller declines in  
17 the residential. We have not had time to look at the  
18 AEO Year '99. We just got it a couple of days ago.  
19 But, I hear through the grapevine that some, it started  
20 to address those problems, but there may still be. We  
21 will look at it further and comment later.

22 MS. NADER: Okay. Thank you. Anything more  
23 on that? All right. Thank you.

24 MR. MCMAHON: I am trying to address two  
25 questions that I think were raised earlier. One is how

1 does AEO '99 compare to AEO '98? And the other is what  
2 is the range of scenarios for future energy prices that  
3 ought to be used? And the Advisory Committee suggested  
4 that at least three scenarios, a high, low and mid,  
5 ought to be used.

6 What we have done is assembly data from a  
7 variety of source of energy priced projections for the  
8 future. These are residential electric prices. They  
9 have all been turned into 1996 cent per kilowatt hour.  
10 This starts in the Year 2000 and goes out to 2015. And  
11 let's see what I can pick out in here.

12 AEO '99 is blue with a circle. They are all  
13 clustered tightly together here. It runs through here.  
14 There is the dot there, runs through the middle and  
15 ends here. And AEO '98 is the close triangles. It is  
16 very close. The values are very similar, all the way  
17 through.

18 So, AEO '99 is not significantly different  
19 from AEO '98. It is a little bit higher but very  
20 small. And obviously, these numbers are available. We  
21 can give them to you.

22 The rest of the forecast from AEO high and  
23 low, economic growth, AGA forecast and GRI's forecast  
24 all fairly tightly clustered here together. Not much  
25 difference.

1           The two that are very different are from  
2           different parts of the Department of Energy. This is a  
3           policy office analysis of a high competition case for  
4           restructuring. And the other one is EIA, at the  
5           request of a committee of Congress, was asked to look  
6           at a carbon tax scenario, very high carbon tax. And  
7           that imposed a very high prices on the consumers. So,  
8           this is the set of projections that I think are  
9           currently on the table for consideration to select  
10          scenarios for the future. The Department has not come  
11          to any decision about what to do. And I don't know if  
12          you want to say anything more about that. I guess at  
13          this point it is open to comment.

14                 MS. NADER: Glenn Scheede.

15                 MR. SCHEEDE: I may have misunderstood, Mr.  
16          Nadel's comment, but I did want to point out that EIA  
17          for once on residential prices has been pretty accurate  
18          as far as their 1998 forecast on residential prices.  
19          Residential prices have come down in '98 for the first  
20          eight months by an excessive three percent compared to  
21          the comparable period, previous year. Residential  
22          prices are coming down even faster than commercial and  
23          industrial, so far in 1998.

24                 So, for once, EIA and residential is about  
25          right, for '98.

1 MR. MCMAHON: Could you repeat that, Glenn.

2 You said that for once EIA is correct?

3 MR. SCHEEDE: On residential. However, they  
4 managed to overestimate or excuse me, underestimate the  
5 rate of decline in commercial and industrial rates.  
6 Again, they have, they basically expect a one percent  
7 per year decline in the rates over a long period of  
8 time. However, they did correctly forecast that the  
9 rates for residential would drop sharply in '98  
10 compared to '97, because they looked at what is  
11 happening in California and the Northeast.

12 MS. NADER: Okay. Steve?

13 MR. ROSENSTOCK: Steve Rosenstock, Edison  
14 Electric Institute.

15 I can't count from here, it looks there is  
16 about eight or nine different pricing scenarios on  
17 that.

18 MR. MCMAHON: There are nine.

19 MR. ROSENSTOCK: There are nine, okay.

20 Thanks.

21 Am I to assume that you are going to try to  
22 include all nine on the future, on the future life  
23 cycle cost spreadsheets? Because right now they are  
24 four, AEO, GRI, I forget the other two, high growth,  
25 low growth, you know, right now there is like four



1 default ones on the, as I recall on the spreadsheets.  
2 Are you going to try to include all nine on future  
3 ones?

4 MR. MCMAHON: Steve, I am just the contractor.  
5 It is up to the Department to decide which scenarios  
6 are going to go on there.

7 MR. ROSENSTOCK: Okay. Question to the  
8 Department of Energy, I guess, it goes for as well as  
9 gas and oil prices, too, are you going to try to  
10 include for electricity, gas, and oil, like nine  
11 different defaults scenarios? I will just call that  
12 for lack of better, nine different defaults projections  
13 for each fuel source?

14 MR. BERRINGER: No, we have no intentions of  
15 running all the scenarios, just choosing one of the  
16 best, best ones to run. They are representative.

17 MR. ROSENSTOCK: And when we will hear about  
18 which ones are "the best ones". Steve Rosenstock, EEI.

19 MR. BERRINGER: And also as -- stated, the  
20 high and low, so you have a range.

21 MR. ROSENSTOCK: So, Steven Rosenstock. Am I  
22 to assume that what EIA has shown is going to be the  
23 high end of the range for electricity, gas and oil  
24 assuming the carbon taxes over the next, you know, 20  
25 years or so?

1                   MR. BERRINGER: There is no decision, no  
2                   decision has been made at this time, but that is, I  
3                   mean, it would be, I guess how likely that carbon tax  
4                   would be, if consider an all likelihood.

5                   MR. ROSENSTOCK: Okay.    Thank you.

6                   MS. NADER: Thank you.

7                   Anything more before we let Jim sit down?

8                   Thank you, thank you, Jim.

9                   Our next presenter is Steve Grover, who is  
10                  with Quantum Consulting. He is going to talk to us  
11                  about the Consumer Survey he is undertaking. I have  
12                  suggested to him that he go through his entire  
13                  presentation and any questions that come up beyond just  
14                  a few, we should probably defer to later this  
15                  afternoon, between 4:30 and 6:30. Steve will be  
16                  available and will have time to go through, go into  
17                  much more detail.

18                  PRESENTATION BY STEPHEN GROVER:

19                  MR. GROVER: All right. Thank you.

20                  All right. Well, this is the first time I  
21                  have been in front of this workshop discussing what we  
22                  are planning on doing for the long awaited consumer  
23                  analysis portion of the study.

24                  In the objectives of the consumer portion of  
25                  the analysis are to, the first is that we want to

1       determine which attributes are viewed by consumers as  
2       being the most important in selecting a clothes washer.  
3       Once we determine which attributes are most important,  
4       then we can move on to the next phase, which is  
5       examining how will changes in these attributes affect  
6       the decision to make a clothes washer purchase. Or how  
7       will changes in these attributes shift purchases from  
8       standard efficiency to high efficiency.

9               Along with this objective then, is an effort  
10       to focus also on those attributes that are most likely  
11       to be affected by the standard and also we are  
12       designing this, looking forward to being able to  
13       calculate elasticities which will then be used down the  
14       road in some of the work that LBL is doing.

15              What we have then is basically a two prong or  
16       a two method approach here for gathering data. All  
17       right. So, again with the objective of looking at  
18       customers and determining their attributes, what we  
19       want then is a nation wide sample of customers,  
20       ordinary customers and what we want to do is first look  
21       at focus groups to elicit from them what are the  
22       attributes that are most important. What are they  
23       really look at when they are making a decision to make  
24       a purchase. Once we whittle this down to the most  
25       important, we are looking at six to eight features,

1 perhaps. Those attributes will be fed into the  
2 Conjoint Analysis. And the Conjoint Analysis will be  
3 used ultimately for a statistical analysis to determine  
4 the elasticities and some of the marginal effects of  
5 changes of attributes. So, I am going to go through  
6 both what is going on with the Focus Groups, as well as  
7 describe in more detail what goes on with the Conjoint  
8 Analysis, which I am guessing not as many people are  
9 familiar with Conjoint as they are with Focus Groups.

10 But, to start off with the Focus Groups, we  
11 are looking at holding focus groups in five distinct  
12 geographic areas. We want to focus on a national  
13 representative sample of different regions in the  
14 country. And focus groups involved recruiting people,  
15 having them come together. There is a moderator. What  
16 this moderator will do is lead a discussion on what is  
17 important in picking out a clothes washer. All right.  
18 So, the group will start with the moderator guiding the  
19 discussion, trying to get unsolicited opinions on what  
20 is important to clothes washers. So, basically the  
21 first part of the session will be groups are allowed to  
22 decide what is important.

23 At the end of that time, once it appears that  
24 most of the unsolicited characteristics have come, have  
25 been presented, the moderator will suggest other

1 characteristics that haven't come up. You know, for  
2 example, if we go for an hour and nobody brings up the  
3 issue of top loading versus front loading, for example.  
4 The moderator will throw that out and give, let the  
5 group gauge their opinion.

6 At the end of this time, we will have each  
7 person within the focus group list out of all the  
8 characteristics that have come up, rank the list, so we  
9 can get an order, rank order of what is important.

10 The way that we have designed this, then, is  
11 we are looking at 10 different groups, with somewhere  
12 between eight and 12 participants. We are looking at  
13 doing 10 sessions, two in each city selected in the  
14 country. We have chosen five cities here, Washington,  
15 these are our initial cities, anyway, Washington,  
16 Madison, or Milwaukee area, Wisconsin, Dallas, San  
17 Francisco and Miami. To get a nice spread across the  
18 regions.

19 We will be looking at collecting a diverse  
20 group of samples, diverse group of respondents to be in  
21 the sample, all right. So, we want to get a broad  
22 range of demographics, things like age, income, and  
23 participants will also be paid \$50.00 a piece. All  
24 right. So, this will be taking place in January. Once  
25 we determine then from this, by looking at the

1 sessions, we will have a total of 100 people, more or  
2 less for the focus groups used to feed into the  
3 Conjoint Analysis. Okay. And what Conjoint Analysis  
4 is, it is somewhat similar to focus groups, in that  
5 people are recruited and they come to a session, and  
6 they are given a deck of cards to sort through. And I  
7 have a set here. I have a set with me, anyway, I  
8 should say. But, the deck of cards is each card  
9 represents a different washing machine. And on each  
10 card the characteristics are listed that are determined  
11 from the focus groups. All right. So, what respondents  
12 do is take these cards and rank them in the order of  
13 their preference. They are told that they should sort  
14 through the cards as if they are definitely going to  
15 purchase a washing machine and now they are sorting  
16 through their available options at the store. All  
17 right. So, the most preferred one goes on the top, the  
18 least preferred goes on the bottom. And so, again,  
19 each washer is described by washer characteristics  
20 determined by the focus groups. So, for example, if  
21 the focus group's determination was that a price  
22 savings, horizontal versus vertical axis orientation  
23 and clothes washing temperatures are, you know, say the  
24 foremost important, each of those characteristics would  
25 be on each card with varying levels of price, savings,

1 axis orientation listed. And what people would do  
2 then, is rank. And what this forces people to do then  
3 is to evaluate which characteristics are important.

4 That as they would when they go to the store,  
5 and they look at issues where, you know, I need this  
6 higher capacity, I would like to save money on my  
7 electricity and my water bills, but this is going to  
8 cost me more. All right, so what is my cutoff point?  
9 What is my tradeoff point?

10 Well, in the meantime, I found my cards.

11 These will be available for people to look  
12 at. This is mock up of just some attributes. These  
13 ranges are just meant for an example. So, please, if  
14 you look at these, do not think by any means that this  
15 what the study is going to look like, but it will give  
16 you an example of what people have to do to sort  
17 through the cards.

18 Okay. So, there is a variety of  
19 characteristics listed on the card. People, the value  
20 of Conjoint is that people have to trade off against  
21 different equipment characteristics.

22 Once they have ranked the cards, then we ask  
23 the question, given your situation today, given the  
24 situation in your home, which of these options would  
25 you actually purchase. And then they are given an

1 additional card that we call purchase card, where  
2 people make a cutoff at the ranked cards, to show which  
3 ones given their situation today, they would actually  
4 purchase a washing machine. So, for example, if you  
5 just purchased one the day before you went to the  
6 Conjoint session, you probably won't purchase any of  
7 the other ones today. If you are thinking about  
8 purchasing one in your future, some of these options  
9 would be attractive.

10 And this gives an idea of some of the  
11 potential demand, which becomes important later on.

12 As with the focus groups, we are looking for  
13 a national sample here. We are going to be recruiting  
14 400 people across four different cities. We would like  
15 the cities to coincide with the ones that are being  
16 done in the focus group, minus one city. But, this  
17 helps, you know, preserves the regional nature of the  
18 data. So, we are looking for 100 participants across  
19 four cities, Washington, Madison, San Francisco, and  
20 Dallas.

21 We will be recruiting people by phone.  
22 People may be familiar with kind of mall incept  
23 Conjoint. We will be doing it by phone. It allows us  
24 to control a bit more of the sample. It ensures a  
25 random sample. One thing I do want to make clear is



1       that we are not looking for representative sample of  
2       the population. But, we are having a random sample  
3       that will be stratified perhaps depending on what comes  
4       out of the focus groups, but we are going to be looking  
5       at getting a good representative sample among some key  
6       demographics. Perhaps, income, age, getting a good  
7       male, female mix for the sample. And this will allow  
8       us along with the regional data, to try and do some  
9       analysis across key demographic groups, to see if there  
10      is any variation there.

11               Also included in the sample will be at least  
12      a portion of the people that recently purchased a  
13      clothes washer. And what this, what this will do is  
14      get input from people that have recently gone through  
15      the spot process. And this will be fresh in their mind  
16      and they will understand, you know, well, I just did  
17      this, what was important to me when I was at the store.  
18      We can't have an entire sample of this, because in one  
19      sense we are using this data to at least get a sense of  
20      the likelihood of making a purchase. So, we can't have  
21      an entire sample of people who have just made a  
22      purchase.

23               With the, as with the focus groups, Conjoint  
24      participants will be paid a \$50.00 incentive to  
25      participate as well. And these are anticipated to be

1 conducted in February.

2 Now, a little bit about the Conjoint and I  
3 apologize if I race through, what exactly goes on in a  
4 Conjoint session, but I will be more than happy to  
5 discuss it later. There are several different  
6 advantages of Conjoint that makes it a very attractive  
7 for this situation.

8 The first is that Conjoint is the one state  
9 preference technique that really lays out different  
10 equipment characteristics at the same time. And this  
11 mirrors as closely as possible the type of decision  
12 process that people go through in the store. All  
13 right. And this is contrast to more of your, more  
14 familiar survey questions where the phrased question  
15 is, you know, would you be willing to be pay \$800.00  
16 for a clothes washer that saved you, you know, \$50.00 a  
17 year on your electricity and water bills? Or would you  
18 be willing to pay an extra \$100.00 if you knew that  
19 this washer would save you \$20.00 a year in your  
20 electricity and water bills? Those are kind of a take  
21 it or leave approach and they are somewhat removed from  
22 reality when they are done over the phone. In this  
23 context when people do Conjoint, when they are given  
24 the time to really sit down and think about it, as if  
25 they were actually purchasing a washer. And my

1 experience has been that this has helped provide  
2 accurate results when we have used the results to try  
3 and predicate purchases of appliances, especially  
4 compared with actual market data.

5 Another good advantage of Conjoint is that it  
6 allows a wide range of statistical techniques to be  
7 used on the data later on. In general what is done is  
8 that in the statistical model, the rankings of the  
9 cards are regressed against the card characteristics.  
10 So, if we had the same characteristics, price, savings,  
11 axis orientation, and water temperature, as your four  
12 characteristics, we can model how changes in those  
13 characteristics change the rankings of the cards on the  
14 individual level.

15 And what this allows us to do then later is  
16 to use this, these estimates of the effect of these  
17 attributes, can be used in a variety of ways. We can  
18 look at what is the likelihood that somebody is going  
19 to purchase a clothes washer? We can estimate the  
20 probability of given that, they decided to purchase a  
21 clothes washer, what is the likelihood that they will  
22 choose a standard efficiency versus high efficiency  
23 option. We can develop a choice set of all different  
24 types of clothes washers, different capacities,  
25 different axis orientation, different prices, different

1 savings estimates. Whatever, whatever the  
2 characteristics that were used in the Conjoint, could  
3 be used to develop choice set. And we can look and  
4 estimate purchases or estimate the likelihood of making  
5 a purchase of all these different characteristics.  
6 So it really does provide a wide range of  
7 opportunities.

8 And finally, once we estimate a purchase  
9 probabilities, these can be calibrated to some of the  
10 actual market data. So, what we can look at is we can  
11 take the stated preference nature of the data, and join  
12 it with some of the actual observed market behavior.  
13 And so, what we are taking, in essence what this is, is  
14 that we are not asking the stated preference data to do  
15 too much. That we are taking away the tradeoff nature  
16 that we learned, from the controls experiment and we  
17 are grounding in real market data, and real purchase  
18 estimates. So, we can get a sense of where we are  
19 starting in the market. So, we have a baseline  
20 starting point that is ground in real market data. And  
21 then we move forward from there.

22 Ultimately, as I alluded to, the Conjoint  
23 Analysis will be used to estimate --

24 Have I not changed this in the last three? I  
25 am sorry, I apologize.

1                   We are on the last slide, by the way.     Off  
2                   in my own world up here.

3                   The Conjoint data will be used to estimate  
4                   purchase probabilities. As I mentioned, both the  
5                   likelihood of making any clothes washer purchase as  
6                   well as we can look at high versus standard efficiency  
7                   or we can take any one clothes washer configuration,  
8                   based on the characteristics in the Conjoint, and  
9                   estimate the probability that that washer will be  
10                  chosen.

11                  Once these probabilities are estimated, then  
12                  we can look at how the likelihood of purchases will  
13                  change in a variety of different methods. And, again,  
14                  there is a lot of flexibility here.

15                  One is we will be looking at calculating  
16                  elasticities to feed in some of the work that LBL is  
17                  doing. The other is just looking at the estimated  
18                  probabilities and asking the question, well, if there  
19                  are two ways to meet the standard, one is an axis  
20                  orientation, versus one is some combination of capacity  
21                  or water temperature, let's look at two comparable  
22                  equipment configurations that both meet the standard,  
23                  and what are, is there any difference and effect on  
24                  purchases, or estimated likelihood of purchase. All  
25                  right. So, we can address those types of questions.

1           We can also look at just individual  
2     attributes. You know, how much do changes and axis  
3     orientation effect purchases. How much does estimated  
4     savings alone change purchases? How much does dropping  
5     the hot water option change purchases? These things  
6     will be evaluated individually.

7           Ultimately, we can also look at holding price  
8     constant. That in a scenario where if there  
9     presumably, how to phrase this. If price increases off  
10    the board, across the board for all options, then what  
11    we might want to do is hold price constant or drop  
12    price from the equation and just look at how do changes  
13    in probability, how do changes in other attributes  
14    affect this probability. All right, so we will look at  
15    it two ways. One an absolute change, when we take into  
16    account a change in price. And second, holding price  
17    constant across choices, and just looking at how  
18    changes in the other attributes that need to be changed  
19    to meet the efficiency standard. How will those  
20    changes affect the likelihood of making a purchase?  
21    And which are the more sensitive issues? So, all these  
22    things can be taken out from the Conjoint data.

23           Okay. So, that is a brief overview. There  
24    is more of a detailed description included in there for  
25    the technical approach, that I would encourage you to

1 read. And then later on, I will be available to answer  
2 things as well.

3 MS. NADER: Thank you, Steve.

4 Steve will be available in the room across  
5 the hall from 4:30 to 6:30. And so, I ask that any  
6 questions you have or comments you save until then.

7 We are running a little bit behind schedule.

8 MR. BERRINGER: Address any comments in this,  
9 that is just a working group. Everybody is --

10 MS. NADER: Oh, all right.

11 MR. BERRINGER: For the record, I think they  
12 should have their questions addressed now.

13 MS. NADER: Okay. Briefly, then, please.

14 MR. SCHEEDE: I was going to ask a procedural  
15 question. Will there be official record of that  
16 meeting or if there will be, then I will save my  
17 question until then, if not, I would like to get two on  
18 the record now.

19 MR. BERRINGER: We were not planning to have a  
20 court reporter or anything at that meeting. So, this is  
21 the opportunity if you want to put it on the record.

22 MR. SCHEEDE: Okay. Two questions.

23 First one, how will the stage be set, what  
24 kind of data will you be providing in terms of telling  
25 the people in the focus groups, and in the Conjoint

1       Analysis, what their expectations should be as far as  
2       energy cost savings or water cost savings. How do you  
3       set the stage for that, and what kind of data will you  
4       be using to set the stage for that? How much of, how  
5       are you going to predict savings?

6               MR. GROVER: Right. It is an interesting  
7       question because on one hand you need to inform  
8       consumers, especially if you are trying to recreate  
9       what is going on in the market. And on the other hand,  
10      you don't want to guide the discussion too much. We  
11      will be providing both with, if cost and savings are  
12      used as attributes, we will have probably three, maybe  
13      four different levels of savings levels and price  
14      levels. Basically, these levels are chosen to run the  
15      range of standard efficiency to high efficiency. So,  
16      what we want to do is provide a price range, and a  
17      savings range that bound all the realistic options with  
18      a little bit of an overlap, just to be safe. So, you  
19      know, savings would be, the maximum, the zero savings  
20      would be for standard efficiency and the maximum  
21      savings would be, you know, whatever the highest  
22      estimated savings you could anticipate under any  
23      situation for a clothes washer.

24             MR. SCHEEDE: Well, you will do something for  
25      those of us who are worried about the average cost, you



1 are not reflecting marginal costs, thinking that is too  
2 high. Are you going to have some low end of the range  
3 in terms of what the savings should be expected?

4 MR. GROVER: The low end of the range of  
5 savings would be zero. It is going to be savings  
6 relative to purchasing a standard efficiency. So, we  
7 need to include standard efficiency characteristics in  
8 the Conjoint as well as high efficiency  
9 characteristics, because that still would be an option.  
10 And we need, what we want to do ultimately is gauge  
11 what is the effect of the standard? So, the study has  
12 to be set up to include both standard efficiency and  
13 high efficiency equipment designs.

14 MR. SCHEEDE: Okay. I will save the rest of  
15 that one for later.

16 The other question, what kind of data do you  
17 have available to show that the findings from this kind  
18 of an analysis reflects the real world? And closely  
19 related to that, is this the kind of analysis that  
20 appliance manufacturers and retailers actually use to  
21 do market analysis? Could you comment just on those  
22 two things?

23 MR. GROVER: Yes, this is something, there  
24 is a broad range of literature available on this. Also  
25 I have done some work with the utility evaluating

1 appliances, specifically air conditioners, using the  
2 same thing, has predicted very well. But, this is  
3 something, another advantage of Conjoint is that when  
4 you do these cards, you can include features and  
5 characteristics that do not exist. That, for example,  
6 assume that there is, there was there horizontal axis  
7 machines available, we could put that into the Conjoint  
8 and still gauge people's opinion about these things and  
9 figure out the trade off. And so, for that reason, it  
10 is very popular for companies to test products that  
11 haven't existed, that don't exist yet, that they are  
12 thinking about introducing.

13 MS. NADER: Okay. At the mike?

14 MR. GREGG: Yes, Tony Gregg, City of Austin.

15 I am not really that familiar with this  
16 analysis, so I just had a couple of questions.

17 One, the five areas you have picked, appear  
18 to be areas, at least from my knowledge, that don't  
19 have any aggressive marketing efforts by utilities. I  
20 might be wrong on one maybe. But, at least four of  
21 them don't appear to. So, my sense is if you picked a  
22 population from those cities, will you be getting, the  
23 people will not have had the benefit of maybe some of  
24 the other reasons to buy H axis machines, if that is  
25 the intent of this survey. And I am wondering, you

1 know, should you be going to someplace like Seattle, as  
2 a separate experience to see what the difference there  
3 between Seattle and say somewhere, where there is no  
4 program or several places.

5 MR. GROVER: Well, two things. First, is  
6 that we will be presenting information to people,  
7 especially at the Conjoint, giving them some background  
8 on, you know, the pros and cons of the high efficiency  
9 designs. So, they will have some information available  
10 addressing that.

11 As far as the cities go, they have been  
12 picked primarily to make sure that we have a good  
13 spread across five different regions. And they have  
14 also been picked to help maximize our resources since  
15 we have familiarity in these areas. And we have people  
16 working those areas.

17 My understanding also was that it is desired,  
18 that there was some work done in the Northwest already  
19 and we wanted to move towards more of a national  
20 sample. Relative merits of one city versus another.  
21 You know, we are not wedded to these particular cities.  
22 But, we want to make sure that it is a national sample,  
23 though.

24 MR. GREGG: I guess, I mean, related to that  
25 is why do people buy H axis machines and I guess I am a

1       little concerned that that might not come out just if  
2       you look at features and costs. Yeah, that is the  
3       primary selling point, but you know wash wise in the  
4       Northwest, you know, it is, I forget what one of the  
5       slogans is but it is good for the environment, a better  
6       world. Clearly, people buy and the Maytag is an  
7       excellent machine, but they are not buying it probably  
8       for the cost savings or people who buy Frigidaire might  
9       be. So, I mean, there are other, I am not trying to  
10      put -- I am just saying the price is lower.

11               MR. GROVER: One thing that we want to  
12      emphasize in the Conjoint, is that brand names will not  
13      be used. They will be driven just by the physical  
14      characteristics of the washing machine. And we are  
15      going to rely on the focus groups. And one thing about  
16      this, is, you know, it would be relatively easy for us  
17      to, I believe come up with six or eight attributes that  
18      we think should be important, but, you know, assuming  
19      that people go and have some degree of awareness and we  
20      inform them on, you know, environmental, the  
21      environmental benefits of this, the savings. You know,  
22      we don't want to dictate to them that they should be  
23      purchasing this because it is friendly to the  
24      environment, if they, you know, either they will know  
25      that from looking at the savings or they won't. But,

1 we have to be careful not to, you know, kind of skew  
2 the results.

3 MR. GREGG: Well, you know, I am not trying,  
4 yeah, I am just saying that the outside influence may  
5 not be there just depending on what, it may be  
6 different if you get something from your city or if you  
7 believe in the energy star program or something like,  
8 some marketing effort that is going on. It is  
9 different if they have already gotten that from an  
10 outside party, then maybe they hear for the first time,  
11 you know, what are some of the environmental benefits.  
12 I am just saying maybe there would be a way to do a  
13 little bit in both markets.

14 MR. GROVER: Right. Okay. We will  
15 definitely.

16 MS. NADER: Thank you. Bryan?

17 MR. BERRINGER: I would just like to follow up  
18 on what you are stating. What came out of the last  
19 workshop, we have done a lot of research. It has  
20 already been done. Obviously, there is Thelma, Bern,  
21 and Washwise. So, we have been given those results.  
22 What was commented at the last workshop is specifically  
23 those are areas that have received rebates or they have  
24 given the machines free. So, we are looking to do a  
25 more national sample of an average consumer. And we are

1 not looking in particular rebate being one. But,  
2 obviously the focus groups, you know, we are not trying  
3 to bias the focus groups at all. We want them to tell  
4 us what is important to them.

5 MS. NADER: Thank you.

6 Steve and then the gentleman at the mike.

7 MR. BERRINGER: He was first.

8 MS. NADER: Oh, thank you. Correct, my  
9 apology.

10 MR. BARZEL: Dan Barzel, Circuit City.

11 Bryan, I support your premise that it is  
12 better to have an objective sample and to spite your  
13 argument, Gentleman from Austin, you are not going to  
14 get a true picture if you sample people who have been  
15 marketed on a particular product. So, you are better  
16 off, I think, with a more objective sample that hasn't  
17 been marketed in a city that hasn't had a program  
18 going, because it is going to give you a better  
19 indicator.

20 One of the questions Glenn asked was do  
21 retailers and manufacturers use Conjoint Analysis. I  
22 have seen manufacturers use Conjoint Analysis to  
23 develop what people will pay for particular features  
24 and the trade offs among features. And generally  
25 speaking, I would say, it is better to approach the

1       problem of what people will pay and whether they will  
2       pay money for a feature, through an objective study  
3       like trade off, than it is not to have any data or to  
4       use conjecture or to use bias sorts of samples, where  
5       you ask -- The most difficult thing to determine when  
6       you are in the situation is when the person is standing  
7       at the cash register, ready to buy, will they actually  
8       take the money out of their wallet? And because you  
9       can't really measure that unless you are in the  
10      position that we are in, which is actually making the  
11      sale. You have to use the next best thing, and I would  
12      say that this is probably, if it is done properly, and  
13      objectively, and use a big enough sample, and you are  
14      doing it across enough different areas, this is  
15      probably the next best thing.

16               And whether, the question of whether  
17      retailers use it or not, probably not. Because people  
18      who buy this product and watch sales rates, can play  
19      with the elasticity every day. We can drop prices on  
20      products and raise prices on products independently and  
21      see what happens to the elasticity or the volume. So,  
22      we don't do any and I doubt that a lot of retailers do,  
23      maybe one or two do it. But, it is a fairly expensive  
24      thing to do when you can get it virtually for free by  
25      playing retail pricing across markets or across the

1 country.

2 But, I think done properly, your approach  
3 seems to be appropriate.

4 MR. BERRINGER: Thank you.

5 MS. NADER: Thank you. Steve?

6 MR. ROSENSTOCK: Steve Rosenstock, Edison  
7 Electric Institute.

8 Just to comment on the cities that I would  
9 have to say, just kind of from my recollections,  
10 Madison, Wisconsin, well, I know that San Francisco,  
11 California, Pacific Gas and Electric, please correct me  
12 if I am wrong, I am pretty sure they are currently  
13 issuing rebates for high efficiency washing machines.  
14 Ted, is that correct?

15 MR. GREGG: Yeah, in San Francisco.

16 MR. ROSENSTOCK: In San Francisco.

17 MR. GREGG: Plus --

18 MR. ROSENSTOCK: Include San Francisco.

19 MR. BERRINGER: Excuse me, could you make your  
20 comments to the mike, please?

21 MR. ROSENSTOCK: Sorry.

22 MR. GREGG: Yes, PGE does provide rebates for  
23 purchasing an efficient clothes washers. And  
24 additionally, some of the water utilities within our  
25 service territory also provide additional funding, as



1 well as outreach in marketing.

2 MR. ROSENSTOCK: So, in that case, it is kind  
3 of a double whammy of both energy utilities as well as  
4 the water utility marketing and promoting certain  
5 product. I am just talking in terms of potential  
6 consumer knowledge or bias in the focus groups.

7 I don't, it might be in Wisconsin. I don't  
8 know if the utilities there. I know the, in the past  
9 the utility in Wisconsin had a pretty aggressive,  
10 again, man type manager programs, whether they included  
11 washing machines, I am not exactly sure. But, I  
12 wouldn't be surprised in Wisconsin that if they did.

13 In Washington, D.C., they did not. They had  
14 aggressive programs, Pepco did, but they did not  
15 include washing machines.

16 I just wanted to address that in terms of,  
17 you know, in terms of city selection that, two out of  
18 the five cities had or have aggressive programs  
19 addressing -- Definitely one possibly, probably two had  
20 aggressive programs for this product.

21 MS. NADER: Thank you. At the mike?

22 MR. ECKMAN: Tom Eckman, Northwest Power  
23 Plant Council.

24 Two comments. Coming from the Northwest,  
25 maybe this is going to sound a little parochial, but I

1 think it would be at least interesting and probably and  
2 of merit to test the differences between an area that  
3 has advocated these types of machines for some period  
4 of time, and areas where they haven't, to see whether  
5 there are differences in the values associated with  
6 various characteristics of the machines.

7 And secondly, I think Dan Barzel's suggestion  
8 that they do price elasticity tests weekly, in every  
9 Sunday ad, would be a really good way to get this  
10 information with the empirical data, because I think  
11 that is probably the right place to test it. So, maybe  
12 something can be worked out with some of the retailers  
13 to get that information.

14 MR. GROVER: One comment about the cities.  
15 I mean, in one sense when we get to the Conjoint  
16 session, there will be information provided that in  
17 essence will level the playing field as far as people  
18 that have, came to the meeting aware, unaware of the  
19 benefits of high efficiency.

20 And the second is that given the amount of  
21 promotion that has been going on nationally, that  
22 awareness is not going to go away. And it maybe useful  
23 to look at, you know, if that is a substantial part of  
24 the population, then you know, it maybe useful to look  
25 at them in the Conjoint session as well.

1                   But, that is definitely something we will  
2                   take into consideration.

3                   MS. NADER: Okay.    I saw a hand over here.  
4                   Yes, Richard?

5                   MR. BEST: Richard Best, Whirlpool  
6                   Corporation.

7                   Since this is the only chance we have to, you  
8                   know, publicly comment on this and I hope, you know,  
9                   following your session later, we will still be able to  
10                  input to DOE on this. But, I hope we are not losing  
11                  focus of the whole intent behind this. And the intent  
12                  of this whole price elasticity issue is to determine  
13                  whether that price effect is on shipment volumes and  
14                  other attributes of this rule, when the rule takes  
15                  effect. And that is going to be in the absence of  
16                  incentive programs. So, I think some of the comments  
17                  here were well in line with that issue. Maybe it would  
18                  be nice to know, but when we have a rule, it is going  
19                  to be based on a non incentive market, the rule itself  
20                  and those effects.

21                  And the second is I have a concern, our  
22                  company does a lot of these type of studies and  
23                  analysis and we know very well the benefits as well as  
24                  the pitfalls of conducting these types of studies and  
25                  surveys. And one of the biggest pitfalls is not

1 looking correctly at the right attributes. And in this  
2 case, the attributes are important, are those that  
3 affect this rulemaking, not the manufacturers' design  
4 decision on how to meet those rules. And so, if you  
5 are asking consumers do they want to pay more, \$50.00  
6 more or \$100.00 more for the door in the front or the  
7 top, or what size knob they have or whether it should  
8 be 22 inches wide or 28 inches wide, I think you are  
9 missing the boat. The attributes will be met by  
10 manufacturers in different ways. And what we do in our  
11 studies as to what, what the consumer really is willing  
12 to pay for from the feature side. So, I would just  
13 like to make that comment.

14 I think it is very important that this next  
15 hour or two in your session that the manufacturers and  
16 others convey their intent here and also convey to you  
17 what those attributes are.

18 MR. GROVER: Yeah, one comment about that is  
19 with the Conjoint, our experience has been that the  
20 best tradeoff information, the most accurate tradeoff  
21 information is, as you said, you need to include the  
22 attributes that are important to the consumer, in  
23 making the decision. And if, I would anticipate that  
24 those would generally be in line with the attributes  
25 that are likely to be affected by the standard. But,

1 in the sense that they diverge, if one of the  
2 attributes that is being changed, such as perhaps knob  
3 size, or, you know, whatever. Say, if that was meant,  
4 you know, something that people don't care about, but  
5 has a price effect, if we have to, if we include that  
6 in the study and drop something that is important, more  
7 important to the consumer, we are going to get suspect  
8 tradeoff information. And it is going to make it less  
9 accurate.

10 MS. NADER: Richard?

11 MR. BEST: Just to reply to that. I think  
12 early on in this rulemaking we moved away from the  
13 design option approach to writing the rule. And all of  
14 the data that was input for the analysis was put in, in  
15 a form with aggregated data, but not with design  
16 options. And a lot of this attribute study seems to be  
17 moving back towards the design option approach. No  
18 one, there is no intent that I know of in this rule to  
19 dictate to manufacturers how they would meet a rule.

20 MS. NADER: Thank you. Bryan?

21 MR. BERRINGER: Just to follow up, Dick, two  
22 things. There will still be an opportunity to comment  
23 up to February 2nd.

24 Second is we are not, we are looking at the  
25 utility issues from that standpoint, too. And since

1       that is a major thing, and the price. So, I mean, it  
2       is really, it is not to get to the design option. That  
3       is not our intent. And our intent is to answer the  
4       questions that have been brought up as far as the  
5       utility issue more or less. And also as far as the  
6       price elasticity.

7               MS. NADER: Okay. At the mike?

8               MR. POPE: Yes, Ted Pope with PG&E.

9               A few years back when we had the Thelma  
10       Research Project, we did sort of a quasi Conjoint  
11       analysis as well as focus groups. And that data is  
12       available.

13              But, I guess, Bryan is sort of confirming my  
14       question, the results of this will be used not only to  
15       understand purchase intent but also to try and  
16       characterize consumer utilities, is that correct?

17              MR. BERRINGER: Yes.

18              MR. POPE: Okay. Just, one little nitty  
19       thing that could be a bigger issue and that is we found  
20       that in the focus groups and we had a demonstration  
21       where people came in one by one and were able to use  
22       certain front loading machines for an hour. That their  
23       perception of convenience, i.e. bending over, changed  
24       radically in a very short period of time. And was more  
25       negative when they had no idea of what a horizontal

1 axis front loading machine looked like. And when they  
2 had a little bit experience, in the case, a real owner  
3 who is determining his utility over time, that opinion  
4 changed pretty dramatically. And so, I am hoping there  
5 is some way that factor could be accounted for, if in  
6 fact, during the focus groups, you know, front loading,  
7 horizontal axis comes up as, you know, key attribute.  
8 So, that is a real time sensitive factor there.

9 MS. NADER: Okay. David?

10 MR. GOLDSTEIN: David Goldstein, NRDC.

11 Another possible issue with the Conjoint  
12 Analysis. You could use it for a lot of things in this  
13 rulemaking. One of the things you could use it for is  
14 to analyze what consumers would do after a standard is  
15 in place. And it is important that the consumers come  
16 in with polluted perspective in the sense of being  
17 exposed to options that aren't going to be there after  
18 the standard really exists. In other words, it is one  
19 thing to ask what would you do if you had a choice  
20 between a low efficiency and a high efficiency model,  
21 and that clues you that there is a low efficiency,  
22 cheaper model that exists. And someone after a  
23 standard and is going to walk into the showroom, they  
24 probably haven't looked at a washer since the last time  
25 they brought one 15 years ago, they won't know what the

1 price of the low efficiency model was, and they won't  
2 know what it looked like. And you can probably handle  
3 this through the study design, but it is important that  
4 phantom choices not be available. Because choices  
5 aren't transient. You can have weird situations where  
6 if the choice is between A and B, a consumer chooses A  
7 but if you expand the choice to include A, B and C, the  
8 consumer prefers B.

9 MR. GROVER: One comment about that is that  
10 the Conjoint is designed so we can estimate a tradeoff  
11 of say price versus other attributes. And what we do  
12 is provide a range of prices that are likely to  
13 correspond what they will see after the standard. So,  
14 if we have A, B and C, you know, A is the low, and C is  
15 the high price, as long as the prices that we use in  
16 our model are between A and C, then we have already,  
17 through the analysis, have already covered, you know,  
18 how people react to prices within this range. And then  
19 when we go to construct a choice set later on, you  
20 know, that has in sense already been taken care of  
21 through the process. Where we get in trouble, is if we  
22 plan for a range of A to C and then have D, which is  
23 higher, you know, outside this range. And then we get  
24 into more shaky ground trying to estimate outside of  
25 what the study was designed for.



1 MS. NADER: At the mike?

2 MR. LINARD: Jack Linard.

3 I find it amazing that you have given this  
4 whole presentation and not once mentioned the  
5 performance of the machine. The idea is to clean  
6 clothes and care for clothes. Nowhere do you indicate  
7 whether any of these design options actually will  
8 change that performance. I can tell you right now,  
9 some of them you have already mentioned, will, in fact,  
10 change the performance but for better or worse. As an  
11 example, we have known for years if eliminate hot water  
12 inlets in the washing machines, you get great energy  
13 figures, but your cleaning performance is really  
14 horrible in many cases. So, I was just wondering what  
15 you are going to do to give an indication of what the  
16 tradeoff would be in terms of performance.

17 MR. GROVER: That is a tricky issue that we  
18 have discussed about how to approach this in the focus  
19 groups. I mean, certainly that is not going to be  
20 brought up during the unsolicited part of the focus  
21 group. But, it will be covered during the discussion.

22 And in one sense, that customers have a  
23 certain presumed idea that I am going to go to the  
24 store and these will probably all clean my clothes, you  
25 know, and hold that as a constant. And then look at

1 the other attributes.

2 To the extent that we can look at adding an  
3 attribute in the Conjoint that has some measure of  
4 cleanliness, my concern would be that that would just  
5 be a real hot button, that might bias things more than  
6 if it was left out. But, that is my initial.

7 MS. NADER: Okay. Steve?

8 MR. NADEL: Steve Nadel, ACEEE.

9 I had a couple of questions and a couple of  
10 comments. I think you started getting to the first  
11 one, which is to what extent will this Conjoint  
12 Analysis give you such things as ability to clean  
13 clothes, wear and tear on clothes. Those are some key  
14 attributes for some of the high efficiency machines.  
15 And if you ignore them, you know, you are significantly  
16 I think bias in your results in one way.

17 MR. GROVER: The Conjoint is going to be  
18 restricted to the most important attributes. And as we  
19 add attributes and levels of attributes, then the  
20 number of cards that people have to sort through,  
21 quickly becomes overwhelming. So, we like to limit it  
22 to probably about, you know, four to six  
23 characteristics with 16 cards. And then we can also  
24 add a separate trade, linking the trades together.  
25 There are techniques for that, where we can incorporate

1 additional attributes.

2 But, again, the intention of this is to, you  
3 know, once, once customers are made aware of during the  
4 focus groups, we don't want to dictate, you know, we  
5 don't want to dictate what attributes they view as  
6 important. And if they are aware that, you know, the  
7 high efficiency design will make clothes last longer,  
8 once they are given that information, if they rank that  
9 20th, then we, you know, that is the point of the focus  
10 group, that, okay, they acknowledged that it is  
11 important, but it is not nearly as important as other  
12 things, then it won't make it to the Conjoint.

13 MR. NADEL: So, if I understand you, you said  
14 you are open to the consumers if they say cleanliness,  
15 or wear on clothes, that will include it.

16 MR. GROVER: Yes. Definitely, that is the  
17 whole reason for the focus group.

18 MR. NADEL: Right and likewise, there is going  
19 to be a whole list of factors that you are going to  
20 mention at the end, to see whether they are important?

21 MR. GROVER: Just, anything that is left  
22 out, we will have like, a universal choice set, and you  
23 know, I think it is conceivable that we might get  
24 through a focus group where people don't consider top,  
25 you know, horizontal versus vertical. And that is

1 obviously key. And it needs to be brought out.

2 MR. NADEL: Okay. A second question, is have  
3 you read the Thelma Study results and as Ted pointed  
4 out, the impacts of consumer familiarity with the high  
5 efficiency machines on their, their acceptance of  
6 different designs. And how do you plan to address  
7 those things? Do you think a basic explanation will be  
8 adequate to address that factor or is something more  
9 going to be needed?

10 MR. GROVER: As far as familiarity with the  
11 designs, we want to have photographs of the different  
12 designs as well as, ideally it would be nice to have,  
13 you know, the actual machines so they could look at.  
14 But, given the five areas that is, I believe, going to  
15 be prohibitively expensive. But, a close second to  
16 that would be having photographs available as well as  
17 pointing out some of the more obvious advantages and  
18 disadvantages, for example, of horizontal axis, you are  
19 not really able to soak your clothes, that type of  
20 thing or add clothes in the middle.

21 MS. NADER: Okay. We are running seriously  
22 short of time. And so, I want to ask if any of the  
23 questions and comments that you still hold, are things  
24 that we could cover in the session with Steve, that  
25 begins at 4:30?

1                   Yes.  Bryan, you have been standing there for  
2                   awhile.

3                   MR. THOMPSON: Just a definition.

4                   In some of the public information I see  
5                   horizontal axis and front loading being the same thing  
6                   and I think there is at least one, maybe more machines  
7                   that do top load and are horizontal axis.  So, I think  
8                   definition there needs cleaned up a little bit in some  
9                   of the public information.

10                  MS. NADER: Thank  you.  Anything else burning  
11                  that can't wait until 4:30?

12                  Okay, great, thank you.  Oh, I was almost  
13                  there.

14                  MR. THOMPSON: This is just a question  
15                  regarding, you are going to be doing, this is Mike  
16                  Thompson, Whirlpool.

17                  You are going to doing two analysis, it  
18                  sounds like.  You are a focus group and you doing a  
19                  Conjoint, is that correct?

20                  MR. GROVER: The focus group is the pre cursor  
21                  to the Conjoint.  So, there is two, two analysis, but  
22                  really the focus group is only being done to feed the  
23                  Conjoint Analysis.

24                  MR. THOMPSON: So, is only being done to what?

25                  MR. GROVER:  To feed into the Conjoint

1       Analysis, to help dictate which attributes are going to  
2       be used.

3               MR. THOMPSON: What I was leading up to, is  
4       then, so one supplements the other. It is not a  
5       waiting process, I am going to give more weight to one  
6       side of this analysis as far as the focus group over a  
7       Conjoint analysis?

8               MR. GROVER: No, it is, the focus groups are  
9       just designed to trim down that list, without, you  
10      know, letting the average customer decide what is  
11      important. So, we are not really guiding the analysis  
12      forward that way.

13              MR. THOMPSON: So, what you going to be left  
14      with is a list of attributes after the focus groups  
15      have finished.

16              MR. GROVER: Right.

17              MR. THOMPSON: Okay. That answer the  
18      question.

19              I had one other comment, and I agree with the  
20      gentleman in the back of the room, from Unilever, that  
21      attributes ultimately are performance. There is stain  
22      removal, there is soil removal, there are lint removal,  
23      they are gentleness on clothes. I am going to presume  
24      that that is going to come out somehow in this focus  
25      group.

1                   MR. GROVER:    Yeah, to the extent that we can  
2                   categorize the differences of performance, we will  
3                   definitely be bringing that out.  We want, again, what  
4                   we want to do is, you know, have as much of a hands off  
5                   approach as possible for these focus groups.  And the  
6                   only role of the moderator is going to be make sure at  
7                   the end of the focus group, that nothing has been left  
8                   out.

9                   MS. NADER: Okay.    So -- This really can't  
10                  wait until 4:30.

11                  MR. ROSENSTOCK: Just a process question.  
12                  Will stakeholders be allowed to view them, to be in  
13                  the, behind the one way mirror?

14                  MR. GROVER:    Yes, one of the reasons why we  
15                  choose Washington was to have an opportunity for people  
16                  to at least, you know, OCS, and what not, to observe.  
17                  And to the extent that people are located in any of  
18                  the, want to travel to the other cities, you are more  
19                  than welcome for both Conjoint and focus groups.

20                  MS. NADER: Okay.    Great.  Thank you.

21                  MR. GROVER:    All right.

22                  MS. NADER: What an interesting topic.

23                  We are going to take a break.  I am going to  
24                  ask that if it can be a brief break.  We are running  
25                  behind.  And we have several other topics to cover in

1 the last hour or so of our program.

2 Traditionally it is a 15 minute break, can we  
3 get away with a 10 minute break here?

4 (Whereupon, a short recess was taken.)

5 MS. NADER: We have a great deal yet to do.  
6 Mike Rivest of Arthur D. Little is going to talk to us  
7 about manufacturer impact analysis.

8 PRESENTATION BY MIKE RIVEST:

9 MR. RIVEST: Thank you. I apologize to those  
10 of you who were here yesterday and have to heard me  
11 again. Yesterday afternoon I covered the GRIM  
12 spreadsheet in great detail. And what I plan on doing  
13 this afternoon is more talking about some of the  
14 objectives of the manufacturing impact analysis and  
15 also some of the methodologies and the overall process.  
16 And I will not be focusing so much on the GRIM  
17 spreadsheet.

18 My presentation has five sections. Quickly  
19 an overview of the framework. Talking a little bit  
20 about the industry profile, the industry cash flow, a  
21 subgroup impact analysis, which is included as part of  
22 the analysis. And I will be concluding with some next  
23 steps in terms of what it is we will be doing in the  
24 upcoming months.

25 To be able to save time I would ask that you



1 keep your questions to the end of each of these  
2 sections.

3 Just a reminder, the Manufacturers Impact  
4 Analysis has its eye on two major elements. First of  
5 all, we are interested in looking at the impacts of the  
6 rule on the manufacturers of the products. Also, we are  
7 interested in working closely with the Department of  
8 Justice and relating to them any information that we  
9 gather during our analysis with regards to the  
10 competitive impacts of the rule.

11 The Manufacturer Impact Analysis is really a  
12 three step process, if you will. And it is very  
13 closely interlinked with every section of the analysis.  
14 We have been working on the industry profile for quite  
15 some time now. We have, yesterday I presented with the  
16 GRIM Spreadsheet some preliminary industry cash flows.  
17 And we will be working through an interview process on  
18 a subgroup analysis and doing some more subgroup level  
19 analysis.

20 The industry profile is not per se discreet  
21 tasks. It is a matter of gathering data that is  
22 relevant to the rulemaking, as the sections and as the  
23 information is needed into the analysis. There is some  
24 information on the industry that is presented in  
25 Chapter 3 of the TSD. But, also the industry profile

1 was arrived at, at determining such things as the  
2 industry cost structure, which we used in setting some  
3 of the cost parameters inside the GRIM model. Some of  
4 the shipments data, historical shipments, that Jim will  
5 be using as a starting point for forecasting future  
6 shipments. We have also done, used the industry  
7 profile to arrive at baseline manufacturer and retail  
8 prices and mark-ups. And some product characteristics  
9 and market shares, which are discussed in Chapter 3.

10 The industry cash flow is based on the GRIM  
11 model. The GRIM model is a very conventional  
12 evaluation tool that is used for evaluating whole  
13 companies, or capital investment decisions. And the  
14 conclusions of the cash flow analysis are presenting a  
15 before standards and after standards industry value in  
16 terms of a net present value.

17 I like to think of the GRIM as simply a  
18 sophisticated calculator that takes a series of  
19 manufacturing costs, shipments, prices and financial  
20 information, to compute cash flows. And this is done  
21 both for a base case and for standards cases, for each  
22 standard level under consideration. So, for the  
23 present time, since all efficiency levels are under  
24 consideration, the GRIM that we have prepared has all  
25 efficiency levels.

1           In our preliminary base case industry value,  
2       if you will, that I used to set up the GRIM, we  
3       obtained information on the existing manufacture price  
4       of clothes washers from the AHAM fact book and the  
5       current industrial reports. Manufacturing costs were  
6       reverse calculated from the prices, using industry cost  
7       structures that we were able to do, using Census and  
8       manufacturer and 10(k)s.

9           Similarly, we developed financial information  
10      representative of the overall industry from financial  
11      information that is publicly available.

12           Very important consideration is the shipments  
13      forecast. For the present time we have shipments  
14      forecast which is basically a slow growth of 2.3  
15      percent. Eventually, our purpose here is to make sure  
16      that the same shipment assumptions that are used in the  
17      National Energy spreadsheet, are also used in the GRIM  
18      model.

19           As I mentioned before, we were able to obtain  
20      manufacturer prices from both the AHAM Fact Book and  
21      the Census, the current industrial reports. We see  
22      that the prices are very flat for many years. And  
23      these are nominal dollars. So in real dollars they  
24      would be going down.

25           We have the industry cost structure from the

1       prices. We allocated the cost in the base case, based  
2       on our analysis of the industry.

3               Our financial information was also obtained  
4       from the study of financial information. And these are  
5       the values that are being used currently in the GRIM  
6       model for the base case. And I reviewed these  
7       yesterday with the people present.

8               For my preliminary base case, if you will, I  
9       just created a scenario with a small increase of 2.3  
10      percent, just a straight regression over the past. I  
11      wanted to create a scenario and start running some  
12      parametric evaluations on it, just to see what kind of  
13      numbers we are coming at.

14              Eventually the intent is that the GRIM  
15      spreadsheet will be linked directly to the NES. So,  
16      the assumptions we make about shipments, before and  
17      after standards, any assumptions we would like to make  
18      about, for example, the percentage of high efficiency  
19      clothes washers and the baseline would translated  
20      directly from the NES to the GRIM spreadsheet.

21              Order of magnitude number, well, better than  
22      order of magnitude, a good first cut in industry value  
23      we obtained is that the industry is currently valued at  
24      about \$885 million. I think this is significant in  
25      that when we look later at the investments we are

1       talking about, to reach some of the high, higher  
2       efficiency levels, we will see the comparative to the  
3       industry value. The investment required are as large.  
4       So, we are talking here about investing as much as the  
5       business is already worth.

6               To adapt the GRIM for this clothes washer  
7       rulemaking, we have made some modifications and some  
8       enhancements, if you will. And most of those were done  
9       primarily to account for change in shipments, to  
10      account for growth, finally.

11             And some of the assumptions that were changed  
12      from the original GRIM are that the SG&A now is a  
13      function of revenues. It is not fixed. Depreciation  
14      and ordinary capital expenditures to the base case are  
15      also allowed to fluctuate with revenues.

16             And also the data gathering exercise that was  
17      done, that done on per unit costs. And we have to make  
18      sure that when our actual investments are made, that  
19      the precise shipment numbers are used in the given year  
20      that the investments are made. So, if the rule is  
21      implemented in 2003, then the number of shipments, it  
22      will no longer be seven million. So, the investment of  
23      800 million, for example, is scaled to the number, to  
24      the actual shipments in that year.

25             For the standards case, we created

1 incremental costs using the AHAM data submittal.  
2 Manufacturer prices, after standards manufacturer  
3 prices are obtained by putting a mark-up on full  
4 production costs. And we ran scenarios at various  
5 markups and I will show some of the preliminary  
6 results.

7 Financial information, the industry  
8 statistics for standards case are the same as the base  
9 case.

10 And also very important to note, in all the  
11 results I will show you, we are assuming that there  
12 will be no decrease in shipments if the price of, if  
13 there is an increase price of higher equipment, higher  
14 efficiency equipment. Now, we know that is wrong. So,  
15 when we have results of the elasticity values from the  
16 consumer survey, the new shipments values will reflect  
17 these elasticity values. And we know that can be quite  
18 significant. I was looking at the analysis that was  
19 prepared for the earlier rulemaking and for an increase  
20 in price of about \$200.00 shipment fell, shipments fell  
21 by about 10 percent. So, that is quite considerable.

22 These are just showing the portion of the  
23 GRIM spreadsheet that contains the AHAM data submittal.

24 Four our baseline model, we calculated  
25 currently the industry applies and mark-up of 1.35 over

1 the full production cost. For the after the standard  
2 scenario on the incremental cost of meeting the  
3 standard, we have applied a number of different  
4 scenarios. A number of different mark-ups. Some of  
5 them, want to point out that a mark-up of 1.18 was  
6 used to calculate the life cycle costs and I ran this  
7 preliminary model at 1.18 to see what would be the  
8 situation for the industry, if that was, in fact, the  
9 mark-up that was obtained.

10 Currently, as I mentioned earlier, some of,  
11 one of the assumptions that we change is, that SG&A  
12 will now be allowed to track the growth in the  
13 business, if you will, the growth in revenues.

14 Another assumption that is very critical and  
15 very sensitive to the timing or the delay in  
16 introducing a standard, is how the capital assets are,  
17 how many is expended for the new capital assets. And  
18 there is a table in the GRIM which shows for any given  
19 number of years, between the actual announcement of the  
20 standard, and the year that the standard becomes into  
21 effect, how the money, the capital expenditures are  
22 spent. And I would just like to point out that this is  
23 the table from the original GRIM. And I would like to  
24 have comments on how I can, if change the schedule of  
25 cash out lays. Just from looking at it, and I don't

1        want to go in great detail right now, it seems that a  
2        manufacturer who has eight years to build up his  
3        capacity, to meet the standard, would probably not  
4        spend 16 percent of that capital, one, two, three,  
5        four, five, six years, before the standard is in  
6        effect. So, I am just questioning some of the original  
7        assumptions in the GRIM and trying to see if we can  
8        improve on them.

9                That is also true of R&D expense.

10              I ran the current version of the GRIM to see  
11        what sort of mark-ups we needed on the incremental  
12        manufacturing costs in order to accomplish certain  
13        outcomes. And here I wanted to see what would be the  
14        mark-up I would need at the different efficiency  
15        levels, to recuperate, to maintain the exact same  
16        industry value of 880 million. And what I noticed in  
17        running these scenarios is that the mark-up needed is  
18        very sensitive to the proportion of fixed costs  
19        relative to the total costs. So, that is really what  
20        we are seeing here. And I graphed the ratio of fixed  
21        to variable cost to the change, to the required mark-up  
22        to maintain the industry value.

23              I also tried to see if we could put about, a  
24        bound on the manufacturer mark-up, back calculating  
25        from some potential outcomes. One of those outcomes



1       being what sort of mark-up would we need to maintain  
2       our NPV, if you will. That might be our higher bound.  
3       There would be absolutely no manufacturing impact from  
4       a higher standard. And the lower bound, which would  
5       represent the mark-up we would need, just, the mark-up  
6       that would result in the industry, losing all of the  
7       capital expenditures to meet this rule.

8               And what I want to show here, this is the  
9       magnitude of the investments to meet the efficiency  
10      levels. So, for example, it costs about 800 million  
11      dollars to meet efficiency, in fixed cost, to meet  
12      efficiency levels eight and nine. And the mark-up you  
13      would need on your incremental production cost is in  
14      the area of 1.25.

15             I am pointing this out because we ran the  
16      life cycle costs at 1.18. And what this is saying is  
17      at 1.25, we lose all of our investments. And ran the  
18      model at different mark-up assumptions, 1.18, 1.27 and  
19      1.35. So, 1.35 represents what we are currently  
20      observing as the mark-up over full production costs.  
21      And we see that the reduction in the industry value is  
22      really proportionally, is really tracking the  
23      proportion of fixed to variable costs. And then I ran  
24      the model at 1.18, and looked at the industry value.  
25      And as you can see, as you get more stringent, the

1 industry value drops dramatically, to an unsustainable,  
2 you know, much below zero industry value.

3 We have created a second venison of the GRIM,  
4 which is able to analyze the manufacturing effects of a  
5 two tier standard. One of the caveats there is that  
6 the assumption is that the costs of meeting those  
7 standards would be additive. So, when you do an  
8 analysis with the two step, the two step GRIM, we have  
9 limited your choices as a first choice in the zero to  
10 25 range, and a second choice in the 35 to 50 range.  
11 And the GRIM assumes that the investments done to meet  
12 the 20 percent efficiency standards will be depreciated  
13 over the length of time that that first phase is in  
14 effect. And that all new investments will have to be  
15 made to recover, all new investments will have to be  
16 made to have that second standard be met.

17 It is our intention that we will use the full  
18 range of data that was submitted for manufacturing  
19 costs. We will be preparing a revised version of the  
20 GRIM, that instead of having only the shipment weighted  
21 averages, we will have all the percentile values. That  
22 will allow us to do scenario analysis, comparing the  
23 impacts of 25 percentile costs fixed or variable, with  
24 shipment weighted or 75 percentile. So, we will get an  
25 idea of the potential distribution of those impacts.

1           Also we would like to work with AHAM to be  
2           able to run full Monte Carlo analysis on the actual  
3           data submittal and present the results. But, we would  
4           be doing that only once we have the shipments from Jim,  
5           that will be used, the final shipments from the NES  
6           model, just to cut down on the burden.

7           And this figure just shows how we would be  
8           using the cost and shipments which are residing at  
9           AHAM, calculating the manufacturing impact separately  
10          for each manufacturer and aggregating those into an  
11          industry cash flow, which would then be part of the  
12          public record.

13          Are there any questions on the last series of  
14          slides or observations or is it too much, did I rush  
15          through it too quickly?

16          I will push on.

17          Now, the second phase, if you will, of this  
18          analysis is to take the industry cash flow that we have  
19          produced and to visit each manufacturer individually  
20          and get a sense of how representative that industry  
21          cash flow is to each of their particular situations.

22          And to be able to do that we will be equipped  
23          with two tools. We will have the industry cash flow  
24          and we will also have an interview questionnaire. And  
25          we have provided a draft of the interview

1 questionnaire, with the materials to this workshop.  
2 And what we are hoping to do within this comment  
3 period, and in the subsequent weeks, is to refine the  
4 questionnaire. What we are trying to do is capture  
5 all, as many of the potential issues as possible in the  
6 questionnaire. So, then when I am conducting the  
7 interviews, we cover all potential and important  
8 issues.

9 MS. NADER: Mike, I am sorry to interrupt, but  
10 we have an opportunity here. Dan Reicher is with us  
11 and has a very short period of time that he can spend  
12 with us. So, may I ask your indulgence and take a  
13 break from your presentation for just a few minutes?

14 MR. REICHER: Yes, I apologize to break in  
15 right now, but wanted to --

16 MR. BERRINGER: Could you step at the podium,  
17 please, the microphone.

18 MR. REICHER: Yes. I am Dan Reicher,  
19 Department of Energy.

20 I apologize for breaking into the meeting. I  
21 am the Assistant Secretary for Efficiency and Renewals  
22 and I, first of all, wanted to thank you for coming  
23 today. I know it has been a long, but I hear it has  
24 been quite a fruitful meeting. And I wanted to  
25 emphasize to you how much we appreciate this input

1       because as you all know, we are in the midst of  
2       reinventing this process and this is one of the early  
3       rulemakings out of that reinvention box.   And we want  
4       to make sure that we take the right steps that will  
5       lead to what we are very committed to, which is putting  
6       out this rule by September of 2000.   We are very much  
7       committed to that, committed to that schedule.   And we  
8       will do all we can to get there.   We are working on  
9       both the policy side and the budget side to make that  
10      happen.   And it is meetings like this where we can  
11      ventilate issues early, we can get them resolved and we  
12      can move forward.   That I think is extremely important.

13               I think that the role of the Advisory  
14      Committee on appliance efficiency standards, which some  
15      of you are members of and many of you have attend the  
16      meetings, also has helped us move this forward and help  
17      shape some of what is being discussed today.   I know  
18      there are some issues that come out of that Advisory  
19      Committee that you are taking up today, and I know  
20      there are some differences of opinion, but from what I  
21      am told, we are making some progress.   And people,  
22      increasingly, are comfortable with the process that we  
23      have put in place to try to move this standard setting  
24      forward, along with the other three major ones that we  
25      are working on.

1                   So, I am, again, thank you for being here.  
2                   Thank you for your commitment to this. Our commitment  
3                   to you is to run a very fair and very open process, to  
4                   take all points of views, to do as much analysis as we  
5                   can realistically do to get answers to things, and to  
6                   be timely in how we conduct ourselves and stick to our  
7                   schedule, so that we can put out a standard that has  
8                   got as much support as it possibly get by September of  
9                   the Year 2000.

10                  So, thank you.

11                  MS. NADER: Thank you.

12                  MR. REICHER: And happy holidays to you all.

13                  MR. THOMPSON: I will just quickly review  
14                  some of the main topics of the interview questionnaire.  
15                  We will be interested in having a better understanding  
16                  of the current organizational characteristics of the  
17                  various firms, understanding the industry  
18                  infrastructure, buyers, suppliers. And in any way in  
19                  which these might be influenced or impacted by the  
20                  rule.

21                  We will be conducting or comparing the  
22                  manufacturing cash flow analysis performed for the  
23                  industry, with any differences or significant variances  
24                  with particular situations, existing at different  
25                  manufacturers.

1           We will, we are interested in understanding  
2           any competitive impacts that the rule may have on  
3           various firms.

4           The big issue in the ballast, I am not so  
5           sure here, the employment impact assessment, how would  
6           the decision to go to a more stringent standard impact  
7           manufacturing in certain facilities, potentially  
8           closing some or opening others.

9           Also looking at the impacts of the rule on  
10          any of your current assets. Would some of your current  
11          assets be somehow stranded as a result of this rule?  
12          And this could apply also to of your major suppliers.

13          The next few slides only detail a little bit,  
14          each of the topics that I just brought up for the  
15          survey. And I invite you read them at your leisure.  
16          But, most of all, to comment back on how I can improve  
17          that questionnaire.

18          One very important distinction, or very  
19          important element of the subgroup analysis is to be  
20          able to report back how some manufacturers may be  
21          impacted more or less or just differently from other  
22          manufacturers. And in so doing, I hope to be working  
23          with the various groups of manufacturers to be able to  
24          report those impacts in a way that preserves  
25          confidentiality, but shows a clear signal to DOE's

1 decision makers, as to how that average manufacturer,  
2 how that average industry impact may, in fact, fall  
3 more heavily on some groups rather than others.

4 MR. JONES: Yes, Michael, Earl Jones here,  
5 G.E.

6 Do I understand that in this section or this  
7 section of your presentation, focuses on sort of  
8 qualitative issues?

9 MR. THOMPSON: That is correct.

10 MR. JONES: That this results in some kind of  
11 a narrative.

12 MR. THOMPSON: Absolutely.

13 MR. JONES: With supplements, what comes out  
14 of the first piece.

15 MR. THOMPSON: Right. The first piece is  
16 strictly by the numbers. And we are looking at overall  
17 industry aggregate impacts in terms of number of total  
18 investments in dollars. And the potential impacts on  
19 dollars for the overall industry.

20 The second phase we move into one on one  
21 interviews, and then we explore how those impacts may  
22 be different, the quantitative impacts may be different  
23 for them. But, more than that, we would like to get  
24 into more qualitative impacts or assessments. Such as  
25 decisions to invest or not to invest in new product



1 lines, you know, leave the business entirely, things  
2 like that. And the result will be, the reported impacts  
3 would be the industry cash flow analysis. If we can do  
4 it without confidentiality issues, we could report a  
5 cash flow analysis for a subgroup of manufacturers,  
6 which would be impacted differently. And then there  
7 would be a narrative which would follow the outline of  
8 the questionnaire. And that is why I urge you to spend  
9 considerable time making sure that the questionnaire  
10 covers all the issues.

11 David?

12 MR. GOLDSTEIN: Yes, David Goldstein, NRVC.

13 Hopefully your discussions with manufacturers  
14 can help to reconcile quantitatively a disconnect that  
15 seems to be coming up from the preliminary work that  
16 you have presented, which is that your preliminary  
17 analysis suggests that the industry is worse off by  
18 producing lots of products at a high efficiency level.  
19 Yet, companies that are producing moderate amounts, the  
20 same products, at the same efficiency levels, are  
21 reporting to Wall Street that they are making lots of  
22 money on that.

23 MR. THOMPSON: Let me give you my two second  
24 explanation for that.

25 The manufacturers will invest where there is

1 a competitive advantage to be gained. And that may be  
2 very short lived competitive advantage. But, to invest  
3 in only meeting the bare minimum, I think it is  
4 different. So, I don't think there is a disconnect  
5 there. I think there is just a different phenomena. Do  
6 you understand? I mean, there are --

7 MR. GOLDSTEIN: I don't think that is a  
8 sufficient explanation. I think that if anything it  
9 should cut the other way, because if you have a  
10 standard, a manufacturer can count on his market share  
11 being relatively predictable, relatively the same  
12 levels, and so that you know that if you make an  
13 investment, you can predict production levels and you  
14 will get it right. Whereas, in this market place, you  
15 make an investment, you are taking a wild guess at  
16 production levels. You could be way off, and being way  
17 off by over optimistic hurts you.

18 So, the additional certainty in standards  
19 would make that actually more profitable. So, there  
20 are factors that cut both ways. It is not the same  
21 situation, but I think the interviews might be able to  
22 help you look at the quantitative analysis. That is  
23 you ought to be able to start off with the industry  
24 quantitative analysis, and turn a couple of levers and  
25 knobs to be able to predict what has already happened

1 out of the models. And then --

2 MR. THOMPSON: I agree with your general  
3 statement that there is a lot of value in the interview  
4 process, which will help to understand a lot of the  
5 quantitative phenomenon. In terms of the exact  
6 example, I guess we could get a great length.

7 MR. GOLDSTEIN: Yes, the example was --

8 MR. THOMPSON: Okay.

9 MR. GOLDSTEIN: I wasn't trying to get too  
10 specific.

11 MR. THOMPSON: Right.

12 MR. GOLDSTEIN: The other issue concerns, you  
13 have analyzed the impacts of the standard as if it were  
14 real simple. You set a standard in a given date,  
15 everyone gears up right before it, they meet the  
16 standard that is all that happens. This product isn't  
17 going to work that way. Because a couple of companies  
18 have already made investments that at least, partially,  
19 I would claim, are in anticipation of their being a  
20 standard.

21 MR. THOMPSON: Have you been talking to  
22 Charlie Stevens?

23 MR. GOLDSTEIN: No, sometimes ideas are just  
24 so obviously right, that people --

25 MR. THOMPSON: No, we -- David, we will --

1                   MR. GOLDSTEIN: There are issues of  
2                   uncertainty about investment and stranded investments  
3                   that are bigger, unquestionably bigger in the base  
4                   case, that need to be analyzed here. If you have a  
5                   company that is making an investment based on a project  
6                   of growth in high efficiency products, and the  
7                   utilities drop out of the game in five years, which  
8                   they may or may not do, and the voluntary programs like  
9                   Energy Start, don't work or aren't funded, which isn't  
10                  a surety, but it is a possibility. That is an impact  
11                  of the base case. And in order to be even handed, you  
12                  need to look at that in the distribution functions,  
13                  just as you are looking at the impacts of standards.

14                 And I think you also need to look at the  
15                 question of what if manufacturers find that it is more  
16                 to their benefit to gear up slowly, piece by piece for  
17                 a standard and try to work with the voluntary programs  
18                 to sell those products on a non regulated basis in the  
19                 first, in the third year, the fourth year, before the  
20                 standard goes into effect.

21                 MR. THOMPSON: There are some element of  
22                 what you said that definitely will be captured in that  
23                 we will have, we will be tracking the shipments and the  
24                 growth in shipments of higher efficiency products, you  
25                 know, linking with the NES.

1           So, those investments will be made and  
2       tracked. So, that will moderate, if you will, the size  
3       of the step function. But, I am not sure that we can  
4       capture all of what you said. That is why the  
5       qualitative discussions, I think will be important.

6           MR. GOLDSTEIN: The point I am making is that  
7       given the size of this investment, your analysis is  
8       already pointing out this is an unusually large  
9       investment for appliance efficiency standard. It seems  
10      to me that many manufacturers will choose not to make  
11      that in a lumpy fashion. But, will rather try to make  
12      it early and make some profit on the product before it  
13      is required, perhaps by marking it up more and  
14      differentiating themselves as current manufacturers are  
15      doing. That is something that needs to be in there, in  
16      the standards case.

17           And in addition, or separately from that, the  
18      base case has to incorporate the reality that you  
19      cannot predict saturation of high efficiency machines  
20      relative to low efficiency ones. And that uncertainty  
21      is a business risk and it is not cost free.

22           MR. THOMPSON: But, it may be symmetrical in  
23      that higher risk has higher potential payoffs.

24           But, we are really getting into analytical  
25      details, I think, that I will be happy to talk to you

1       about.

2               As I have mentioned, we have already, DOE and  
3       myself, met with the Department of Justice on two  
4       occasions, concerning this and other rules. And they  
5       plan on playing a very active role in helping us, for  
6       example, develop the interview questionnaire, and they  
7       will be monitoring, if you will, the analysis and  
8       making sure that their data needs are met to the extent  
9       possible, to facilitate their own tasks when they have  
10      to do their DOJ review.

11             Just to move on to the next steps. This, as  
12      I mentioned, this analysis is really very closely  
13      linked with all other sections, all over sections of  
14      the analysis. And the current sequence is that the  
15      consumer analysis will give us some idea of the  
16      customers willingness to pay, if you will, or the  
17      elasticity. Those elasticity values will be used by  
18      Jim to develop shipment forecasts. And the shipment  
19      forecast developed for the NES spreadsheet, will then  
20      be used in the GRIM.

21             So, the sequence of events, I plan on  
22      initiating dialogue with manufacturers on the one to  
23      one basis, during the winter. And to begin, first of  
24      all, making sure that we have the best possible  
25      instrument that we can, begin getting a grasp on some

1 of the major issues.

2 Once we obtain the shipments from NES, that  
3 is when we will finalize our scenarios for the industry  
4 cash flow. And visit the manufacturers with that, those  
5 cash flow scenarios and with our interview guide and  
6 report back, we will be beginning the interviews in the  
7 Spring.

8 Any questions on the schedule, the time line  
9 as it --

10 MR. HAWKINS: This is Larry Hawkins, G.E.

11 Your handout package, Michael, has a  
12 different first bullet date, February the 2nd versus  
13 January 15th.

14 MR. THOMPSON: I am sorry, what happened  
15 there is that I had taken 30 days as a comment period  
16 for this workshop, and we just heard that the workshop  
17 will be made to coincide with the ANOPR comment period.  
18 So, the February 2nd is the correct date.

19 That completes this presentation. I will be  
20 standing around after the meeting and I will be happy  
21 to talk to any of you about this in more detail.

22 MS. NADER: Thank you very much.

23 MR. MONTUORO: I have a comment. I am Lou  
24 Monturo with Amana Appliances. And we presented data  
25 earlier that, on a cost tear down analysis of two H

1 axis machines in another high energy, efficiency  
2 machine.

3 MR. THOMPSON: Yes.

4 MR. MONTUORO: Will that data be, will that be  
5 additional data to be incorporated into GRIM or is  
6 there going to be some type of reconciliation done with  
7 that data, with what AHAM initially has supplied?

8 MR. THOMPSON: No, that data was, I am not  
9 sure what data you got, so -- The data that we will be  
10 using is data that was supplied to AHAM. You may have  
11 supplied data directly to Steve for the purpose of the  
12 reverse engineering. I don't have that data.

13 MR. MONTUORO: No, I just mean we analyzed, we  
14 did a tear down of the two H axis machines and the  
15 Whirlpool prototype. Is that financial information  
16 that was generated to be incorporated into this model?

17 MR. THOMPSON: Not as such. I mean, one way  
18 that we can, for example, model the impacts no lower  
19 volume manufacturers would be to take the production  
20 model that Steve prepared, and run the model at lower  
21 volumes in slightly different production configuration  
22 and get an idea of what sort of costs are involved in,  
23 differential costs between high and low production  
24 manufacturers. So, that is one way we could use the  
25 model. But, the information per se is not part of the



1 GRIM.

2 MS. NADER: Thank you, Mike.

3 I know there may be other questions and  
4 comments and I regret that we simply don't have any  
5 more time for that now. And would encourage you to  
6 talk to Mike in the next few minutes when, since he has  
7 said he will continue to be available.

8 MR. BERRINGER: Or an opportunity to submit  
9 written comments also.

10 MS. NADER: Yes. Thank you.

11 Jim McMahon, patient soul that he is, now has  
12 three additional areas he is going to cover. Indirect  
13 employment, environmental assessment, and utility  
14 impact analysis. And Jim, I am sorry the time is so  
15 constrained.

16 PRESENTATION BY JIM MCMAHON:

17 MR. MCMAHON: Okay. The first topic is  
18 indirect employment impacts.

19 Okay. Indirect employment impacts.  
20 Standards could effect consumer spending in two ways.  
21 We expect that standards will increase the purchase  
22 price of regulated products and decrease consumer  
23 energy and water expenditures.

24 The direct employment impacts have just been  
25 described by Mike Rivest and those will be analyzed in

1 the manufacturer impact analysis.

2 There are also indirect employment impacts by  
3 which we mean net jobs, created or eliminated in the  
4 U.S. population at large, as a consequence of new  
5 energy efficiency standards.

6 Currently residential energy consumption,  
7 energy expenditures, this is for 1995, were 129 billion  
8 dollars. Possible energy efficiency standards are  
9 expected to reduce those expenditures. And as the life  
10 cycle cost demonstrates, usually the projected increase  
11 in equipment prices is overcome by decreases in energy  
12 expenditures over time.

13 The proposal is to use an input, output model  
14 to estimate the effects on other sectors of the economy  
15 from the changes in consumer spending.

16 In this case, the model is a model called  
17 Inbuilt. This is based upon a commercial product  
18 called Inplan, which is available for purchase.  
19 However, you will be happy to hear that in this case,  
20 the Department of Energy has taken the commercial  
21 product, developed a spreadsheet version of it that is  
22 simpler, and is able to give away the spreadsheet  
23 version of it. So it is fully available and  
24 documented.

25 This was done by Pacific Northwest

1       Laboratory. I believe there are two volumes of  
2       documentation and we will be happy to have those put on  
3       the record.

4               The U.S. Economy is characterized as  
5       interconnection among 35 sectors. The 35 are those  
6       that are important to building energy consumption. The  
7       other sectors are the economy that are not expected to  
8       be affected, have been aggregated.

9               The input into the model are shifts in  
10      expenditures due to standards. There are two of those.  
11      The equipment expenditures and the interview  
12      expenditures. These will come from the National Energy  
13      Savings spreadsheet.

14              And then the output will be the change in  
15      employment by sector as a consequence of the new  
16      standards.

17              What do we expect to find? We expect there  
18      will be reduced spending for energy and water. That  
19      may cause reductions in employment in the energy and  
20      water supply sectors. There will also be a shift of  
21      spending away from energy toward other sectors, and  
22      that could potentially create jobs in those other  
23      sectors. So, the net result will be the net job  
24      creation or elimination by sector will be estimated.

25              Are there questions on this?

1 MS. NADER: Richard?

2 MR. BEST: Yes, Richard Best, Whirlpool.

3 Are you going onto another topic from here?

4 MR. MCMAHON: Yes.

5 MR. BEST: Okay. Because I do have a comment  
6 here and I think it is relevant to going in the record  
7 here.

8 When you are looking at indirect employment  
9 impacts, it seems as though the model is basically one  
10 of, within the contents of the United States. And my  
11 comments are related to this. You know, the U.S.  
12 appliance industry is unique. And one thing unique  
13 about it, is over the past generation most of us  
14 watched as the American auto industry was basically  
15 dismantled. We watched our consumer electronic  
16 industries move overseas. But, through it all the  
17 appliance industry remained in tact and fairly healthy.  
18 And we did it through invocation, cost, and  
19 productivity and passing those things onto the  
20 consumer. The prices of appliances today are basically  
21 at the same price they were a generation ago, even  
22 without inflation.

23 I think the issue here is one that this rule  
24 will force a lot of investment on the manufacturers and  
25 significant changes to the products we are going to

1       produce. The question is how much investment, how soon  
2       and how significant will the changes be? And my  
3       comments are that from a global perspective, we have  
4       another employment potential impact here, that needs to  
5       be considered in the rulemaking. First of all, the  
6       appliance industry, global competitive posture is going  
7       to be threatened just by the diversion of major  
8       technical and financial resources during this rule  
9       making period.

10               The second is that this, the playing field in  
11       the U.S. will be level for all competitors on a global  
12       basis if it is a major change to our markets. And most  
13       of the productivity gains made over the years by U.S.  
14       companies, could be wiped out by these change overs to  
15       new products and processes if there is not sufficient  
16       time to allow the transition in a smooth manner. And  
17       for us to reestablish our global competitive leadership  
18       that we have worked on for the last several decades.

19               And the last point is that global pricing, or  
20       competitive pricing on these products could double or  
21       triple as pointed out many times in these arguments,  
22       and that just rises the probability of an import market  
23       taking place. Thank you.

24               MS. NADER: Thank you.

25               MR. MCMAHON: Thank you, Dick.

1 (Pause.)

2 MR. MCMAHON: Okay. Moving to the next topic  
3 on the agenda. You have a handout called Methodology  
4 for Utility and Environmental Analysis. These are  
5 combined into the one handout.

6 MR. JONES: Oh, excuse me, Jim. Earl Jones  
7 here. I was just trying to digest some of the previous  
8 comments. You know, I don't understand what this  
9 employment impact, what it will do? Did I miss that?  
10 Or how does this thing work? Are you telling me that  
11 you are going to do something, but you don't know what,  
12 how it will be done? Is that what I understood?

13 MR. MCMAHON: No, that is not what I said.

14 MR. JONES: Okay. So, what then, what did  
15 you say?

16 MR. MCMAHON: Let me try and restate it.

17 The methodology here is an input, output  
18 model. That divides the U.S. economy into sectors, and  
19 specifies the flow between one sector and another. And  
20 what we are saying is that the standards will  
21 presumably affect consumer expenditures in two ways.  
22 They will --

23 MR. JONES: Well, I understand that. I  
24 understand everything you have on this paper, because I  
25 think it is fairly good English. But, I still don't

1       what the hell it means at the end of the day. In other  
2       words, what, what will, what is this analysis going to  
3       provide? It is going to somehow determine, and I guess  
4       I can't understand from what is here, how it is going  
5       to determine that, what is going to be the net addition  
6       or gain? And how, what information will go into  
7       deciding what, whether it is up or down?

8               MR. MCMAHON: In simplest terms, if there are  
9       increased expenditures into a sector, if consumers, for  
10      example, hypothetically, were to purchase some other  
11      product with the money that they saved in energy, then  
12      presumably that sector would respond by selling that  
13      product to the consumer. And that increase in sales  
14      might lead to increased employment in that sector.

15             MR. JONES: Yes.

16             MR. MCMAHON: So, what the model is doing, is  
17      taking a snapshot of the current economy, and what the  
18      current flows are, and then we are imposing upon that a  
19      probation where we say, instead of this money being  
20      spent on energy, it is now spent on other things.

21             MR. JONES: Right. And how will you, what are  
22      the assumptions which say that those are additional  
23      dollars represent X or Y jobs?

24             MR. MCMAHON: Associated with production in  
25      each sector are workers. And the idea is that if

1 production increases there will need to be more  
2 workers.

3 MR. JONES: And there is some formula based on  
4 the particular industry which says that in the, in the  
5 entertainment industry or the travel industry or the  
6 construction industry, if people spend more or less in  
7 those areas, there is a differential number of jobs  
8 added or lost? Or is there just a number that applies  
9 across the economy?

10 MR. MCMAHON: The former.

11 MR. JONES: The former. So, then, so and the  
12 information which says what the impact is by particular  
13 sector, is something which you all are developing or is  
14 available otherwise?

15 MR. MCMAHON: We have not developed it. It  
16 has been developed. There are good accounts of the  
17 National Economy already developed. This is using a  
18 model that already exists.

19 MR. JONES: Okay. So, then, totally aside  
20 from the question of energy and the impact of  
21 standards, you are saying that there exist a model  
22 somewhere which says, that if expenditures increase in  
23 a particular segment, or sector of the economy, that  
24 equals X or Y jobs?

25 MR. MCMAHON: Yes. That is correct.



1                   MR. JONES: Okay.    And you are going to  
2 piggyback on that by saying if we divert the expenses,  
3 the expenditures previously used for energy and water,  
4 and move them over here, then it will have the same  
5 impact?

6                   MR. MCMAHON: That is correct.

7                   MR. JONES: Okay.    Thank you.

8                   MS. NADER: Carry on.

9                   MR. MCMAHON: The next topic is utility  
10 analysis.   The purpose of the utility analysis and we  
11 have used the utility in a couple of different places.  
12 In this case we are meaning energy supply sector, the  
13 utilities that supply electricity and gas.

14                   The purpose is to estimate the effects on  
15 those utilities from reduced energy sales due to the  
16 new standards.   The method is to use the NEMS model,  
17 the Department of Energy, Energy Information  
18 Administration, National Energy Modeling System.   We  
19 are calling it NEMS-NAECA, because EIA is very  
20 proprietary about their model.   If anyone else uses it,  
21 we have to rename it, so that it is not confused with  
22 the official DOE model.   So, we are calling it NEMS-  
23 NAECA.   It is an exact copy of the official DOE model.

24                   It is an integrated model of the U.S. Energy  
25 sector.   It includes all supply and demand.   It is

1 publicly available. And it contains a forecast through  
2 the Year 2020. There are also extrapolations done out  
3 to 2030 for FEMP. And we intend to use the Department's  
4 extrapolations rather than our own.

5 The current basis to date has been the annual  
6 energy outlook 1998, within the last month, the annual  
7 energy outlook for 1999 has been made public, over the  
8 Thanksgiving weekend. One of our staff came to the  
9 Department and captured a copy of the 1999 model and  
10 brought that back to LBL. So, we will be using that  
11 one in the future.

12 The inputs to the analysis are annual energy  
13 consumption and savings by fuel type from the National  
14 Energy Savings spreadsheet. All the other inputs will  
15 be consistent with those used by the Department of  
16 Energy.

17 The output, the model as I have said, balance  
18 all supply and demand. So, it will be given the  
19 savings from the standards and then it will conduct its  
20 balance. That balance will potentially affect price as  
21 well as the supply of energy. And we will report back  
22 then the change in energy sales and price by fuel type  
23 and by region. We can also report back the change in  
24 the mix of electricity generation, if any. And the  
25 change in new capacity construction, if any.

1 MR. ROSENSTOCK: Could I comment?

2 MR. MCMAHON: Yes.

3 MR. ROSENSTOCK: Steve Rosenstock, Edison  
4 Electric Institute.

5 Maybe more of a nomen clature than anything  
6 else. This kind of model is still kind of working on  
7 the assumption of, at least as far as I see, vertically  
8 integrated entities, whether it is gas or electric.  
9 And since we are projecting forward in the future, when  
10 you are doing this type of an analysis, when you are  
11 get right down to it, how is it going to affect the  
12 electric generation companies, the natural gas  
13 suppliers, production companies, the electric  
14 distribution companies, and the natural gas  
15 distribution companies? I will leave oil out as a  
16 separate kind of entity, since it has been deregulated.  
17 I would propose those kind of four categories, because  
18 basic, or these distribution companies, because there  
19 are going to be different view points, depending on  
20 what part of the sector you might be in. And I think  
21 that, as just a generation supplier versus a  
22 distribution company, there might be different  
23 attitudes in terms of, or different impacts on, from  
24 new standards.

25 So, part of is that. And I guess the other

1        thing I wanted to state was, the other item was, the  
2        fact that with a lot of the new technologies, with the  
3        new merchant plans going on line, especially in New  
4        England, and California and actually in several parts  
5        of the country, the impact of merchant plans and the  
6        wild card especially of distributed generation. Well,  
7        increase emphasis on combined heat and power systems,  
8        and distributed generation, which is really, let me get  
9        right down to it, you know, on site generation systems  
10       and the fact that several large companies are investing  
11       capital to, you know, sell and service the systems  
12       throughout the United States. I think there is going  
13       to be a lot more, I will say wild cards, for lack of a  
14       better word, in terms of this type of analysis that I  
15       am not, you know, again, I am not, I am partially  
16       familiar with it, I am not totally familiar with it,  
17       but I think they are going to have a significant  
18       impact. And they will have an impact in terms of, you  
19       know, what, you know, customer self generation, I  
20       guess is the other word to say it. All of these  
21       factors are going to, you know, play into NEMS and  
22       ideally they will be accounted for, because they will  
23       have an impact when you get down to heat rate  
24       conversions as well, you know, onsite electrical or  
25       natural gas type of usage.

1           I mean, well, especially on the commercial  
2       side. Even residential, for example, if you are  
3       generating electricity on site, some of the, I will  
4       call it the waste heat, might be used for thermal  
5       applications, base heating or water heating. Well, if  
6       you reduce your, if you are having, if you are  
7       producing it on site and you are reducing the usage of  
8       the water heater or clothes washer, are you, what  
9       exactly are you saving, if it is just basically, I will  
10      say "waste heat." I don't want, you know, it is not  
11      necessarily waste heat, but I will just say it, it is a  
12      generation process. It could be considered extract  
13      heat.

14           So, I mean, this is just some of the issues  
15      that ideally could be, need to be addressed in this  
16      type of analysis. Because it will, it will have an  
17      impact on your final numbers when you get to the  
18      National Energy Savings. Thank you.

19           MS. NADER: Thank you. At the mike?

20           MR. ECKMAN: Tom Eckman, Northwest Power  
21      Plant Council.

22           Jim, does the NEMS model take into account  
23      the reduced energy consumption due to the water  
24      savings, at the treatment facility?

25           MR. MCMAHON: I don't know the answer to that.

1 I have not checked. We will check that.

2 MS. NADER: Yes.

3 MR. MORRIS: Wayne Morris with AHAM.

4 I have a question, Jim, in terms of the  
5 utility impact situation.

6 In the ANOPR, it states that you are looking  
7 at an utility analysis in terms for a baseline versus a  
8 standards case kind of scenario, I believe. Does the  
9 baseline assume the impact of the most recent  
10 refrigerator rule and the room air conditioner rule in  
11 terms of this, since they will be also taken into  
12 account when you do or at least the Department will be  
13 taking them into account when you do the multiple  
14 scenarios of standards cases on manufacturers.

15 MR. MCMAHON: Are you talking about the rules  
16 that have already been finalized?

17 MR. MORRIS: Yes.

18 MR. MCMAHON: Yes, it does.

19 MR. MORRIS: Thank you.

20 MS. NADER: Thank you. Glenn?

21 MR. SCHEEDE: Glenn Scheede. I just think  
22 that if people are not familiar with the NEMS model,  
23 and how this thing is developed, you ought to get  
24 familiar with it, and you ought to recognize that it is  
25 fundamentally behind what is happening in the industry.

1       It is always a couple of years behind, because the  
2       industry is changing a lot and the NEMS model is  
3       heavily based on historic data and historic  
4       relationships and historic algorithms.

5               So, if you are assuming that this is a good  
6       predictor model, it is, they try, they try hard to do  
7       it, but it is inherently behind. And if you are  
8       concerned about some of the things that Steve talked  
9       about, you ought to get familiar with the assumptions  
10      that drive that model, because they are not necessarily  
11      up to date.

12             MS. NADER: Thank you.

13             MR. JONES: Earl Jones, here. Again, I have  
14      a question. I just want to know, again, Jim, with  
15      respect to both these analysis or models, that you just  
16      presented. How much of the data is available to the  
17      people who are in this room?

18             MR. MCMAHON: All of the data.

19             MR. JONES: All of it is.

20             So, if you wanted to find the information  
21      that supports this indirect employment impact, where  
22      would you find that? Where is that? Is that in --

23             MR. MCMAHON: There are two reports from the  
24      Pacific Northwest Laboratory.

25             MR. JONES: I am sorry?

1                   MR. MCMAHON: There are two reports from the  
2                   Pacific Northwest National Laboratory, that are  
3                   available.

4                   MR. JONES: They are not in any documents  
5                   provided so far, are they?

6                   MR. MCMAHON: I don't believe so.

7                   MR. JONES: Okay.     And I am just curious,  
8                   Bryan, is it the Department's intention to somehow put  
9                   those in the record or are we suppose to go get them  
10                  from the lab?

11                  MR. BERRINGER: If they are publicly  
12                  available, we will get copies of them. We will make  
13                  sure, you know, anybody that requests them, we will get  
14                  a copy to you.

15                  MR. JONES: So, is this a request or do you  
16                  want me do to something other than make it now?

17                  MR. BERRINGER: No.

18                  MR. JONES: Okay.     Thank you.

19                  And then what about the second one, the NEMS,  
20                  that is a DOE developed, if I understood, model.

21                  MR. MCMAHON: That is correct.

22                  MR. JONES: Which is available where?

23                  MR. MCMAHON: From the Energy Information  
24                  Administration in this building.

25                  MR. JONES: Okay.



1 MS. NADER: Thank you. Other questions?

2 Additional comments?

3 MR. MONTUORO: Lou Montuoro, Amana Appliances.

4 I need to go on the record with a couple of  
5 comments.

6 Number 1, Amana would like to officially  
7 request an extension to the February 2nd comment  
8 period, for two months, to go from Groundhog Day to  
9 April Fools Day. As our friends in Whirlpool so  
10 elegantly put, this is an important issue. We are  
11 doing the best we can to understand the model, how it  
12 affects our company. And we will be able to give you  
13 better quality of feedback back.

14 I think this was, it was, it happened, you  
15 know, the ANOPR came out right before Thanksgiving. It  
16 comes during corporate holiday time. I think it was  
17 probably delayed because of the complexity of the  
18 situation.

19 So, we are officially requesting that.

20 And the second item, there was some cost  
21 information, I wasn't sure if it was sensitive or not,  
22 on tear down analysis of the H axis machines, not the  
23 prototype. And we would like to obtain the data from  
24 that, if that is publicly available. Al and I think  
25 that is public data and we should be able to get that.

1           MR. BERRINGER: And the reason you say you  
2           need two months for the extension of the comment period  
3           were reasons of holiday, is that an absolute necessity?

4           MR. MONTUORO: Well, the question is how much  
5           time we have to analyze the impact on our company and  
6           give you a response with data. And right now we are  
7           looking at a February 2nd date. And it is very  
8           important to our company and we are working on it, but  
9           obviously we will be able give you better information,  
10          better feedbacks if given more time. The question is  
11          what is reasonable? So, we think it is reasonable  
12          to ask for a two month extension.

13          MR. BERRINGER: Okay. And does anybody have  
14          a calendar as far as when that would be?

15          MR. MONTUORO: April 1st. Two months. That  
16          would be a Thursday, April 1st.

17          MR. BERRINGER: Were you finished?

18          MR. MONTUORO: Yes.

19          MR. BERRINGER: Okay.

20          MS. NADER: Yes, Mike?

21          MR. MCCABE: This is Michael McCabe with the  
22          Department of Energy.

23                 The follow up question, Lou, with respect to  
24          additional time, if you could be more specific as to  
25          what parts of the analysis that you would need

1 additional time, because for example, with what Mike  
2 Rivest of ADL had presented on the manufacturer impact  
3 analysis, there are going to be a series of one on one  
4 meetings that will be taking place. And if you need  
5 additional time to provide input on the manufacturer  
6 impact analysis, there will be that exchange during the  
7 February and March time frame. If it is additional  
8 time to comment on the NES analysis or life cycle cost  
9 analysis, we would appreciate some of those specifics.  
10 The request will be considered by the Department as Dan  
11 Reicher indicated, he is committed to issuing a final  
12 rule by September of 2000. And that any request for an  
13 extension of the comment period, you know, that he will  
14 evaluate as to what impact that will have on the  
15 schedule and would be interested in others, in what  
16 they would have to say as far as what the additional  
17 time would be of value to them. But, particular with  
18 your request, you know, if you could provide some more  
19 specifics as to the areas of the analysis that you  
20 needed the additional time.

21 MR. MONTUORO: Sure. Right now, of course,  
22 what is important to us is do our financial models  
23 represent our small manufacturer. We are doing the  
24 best we can to understand that. We understand there  
25 was aggregate data provided by AHAM. So, we would

1 understand that along with our options. The ANOPR, I  
2 think delineates, I think it is about 11 items, for  
3 comment on, including some of the things we have  
4 covered, the product class size, the detail on retail  
5 mark-up assumptions, information the elasticities. I  
6 thought the ANOPR was asking for responses to those  
7 items. And to give, to give response to those items  
8 and the work on those, those are the basic items that  
9 we talked about before this meeting. Since coming  
10 yesterday, I found out that there is going to be some  
11 additional interviewing processes with our company,  
12 which is good. But, nonetheless, to respond to the  
13 ANOPR and all the items that are listed in the ANOPR,  
14 all the complexities that we are talking about here, we  
15 are asking for an extension from February 2nd.

16 MS. NADER: Mike, do you have anything else?

17 MR. MCCABE: I will stay here because I  
18 suspect that there will be some more.

19 MS. NADER: Okay. Thank you. Yes?

20 MR. MORRIS: Wayne Morris with AHAM.

21 We polled our members and a majority, not a  
22 unanimous position but the majority of the members did  
23 ask for an extension of time to respond to the items  
24 that are in the ANOPR. It is a particularly difficult  
25 time period with the holidays. A number of trade shows

1       that do come about in January and February of this  
2       year, with the International Housewares show in Colgna.  
3       As Lou pointed out, there are quite a lengthy period  
4       of, amount of materials in the ANOPR that are asked for  
5       responses to. Our members did feel that additional  
6       time is necessary.

7               The amount of time seems to vary between 90  
8       days and 60 days, 45 days. But, I think Lou's proposal  
9       of 60 days is probably in the ballpark of where the  
10      majority of companies that wish an extension to be. As  
11      I said, this is not an unanimous opinion by any means,  
12      but it was a majority of the companies that we polled.

13             MS. NADER: Thank you. Steve Nadel?

14             MR. NADEL: Thank you. I guess we have  
15      substantial problems, as no one would be surprised,  
16      with a request for extension. When the process  
17      improvement rule came out, rules were suppose to be  
18      completed within three years. This rule is suppose to  
19      be an accelerated rule because it already started. We  
20      are now more than three years into it, at least two  
21      years to go. Now, we want to extend it further? I  
22      think a tradeoff was made during the process  
23      improvement, that basically said, we are going to have  
24      more frequent reviews, but we are going to have shorter  
25      reviews. If we are going to have more frequent reviews

1       than longer reviews, it just doesn't work. So, I think  
2       people have to make a basic decision, do they want a  
3       few long reviews or more short reviews?

4               I would ask the gentleman from Amana, you  
5       know, on top of DOE's request, what particular things  
6       they do, if he sees some particular areas subsequently  
7       in this schedule, where, gee, if you take two months  
8       here, we can cut a month here and a month here. That  
9       is reasonable, I think. It would be very helpful to  
10      have those suggestions.

11             I had also observed that, at least from my  
12      reading of the ANOPR, most of the issues that are here  
13      are just a restatement of things that we came up with  
14      during the last workshop. I don't see very much new  
15      material. The only real significant new material is  
16      the reverse engineering on a few more models. But, I  
17      mean, when I reviewed it, my thing was, gee, maybe we  
18      shouldn't have had that last workshop and comment  
19      period. We are just repeating that. I would think the  
20      time would be better spent elsewhere. But, if people  
21      want more comments now and then we will just go  
22      straight to ANOPR, short period and then straight to  
23      final rule, we can. But, I don't think this is the  
24      place where the time is best spent.

25             MS. NADER: Thank you.

1                   MR. THOMPSON: Mike Thompson, Whirlpool  
2                   Corporation.

3                   We are one of the companies that did object  
4                   to an extension of the comment period. We all know  
5                   that DOE is years behind on promulgation of a final  
6                   rule on clothes washers. We all know that DOE  
7                   continually has allowed the rulemaking to slip time  
8                   line wise. The last thing that I knew it was going to  
9                   be a July extension. This morning I walked in,  
10                  surprised to see another two months slip by. So, at  
11                  this point in time, we vehemently oppose any further  
12                  extensions.

13                 MS. NADER: Thank you. Steve?

14                 MR. ROSENSTOCK: Just a quick question. Steve  
15                 Rosenstock, EEI.

16                 It says publish ANOPR in November of '99 and  
17                 then final rule in September 2000. I guess that is  
18                 about a nine month in-between. What is the reason?  
19                 Was that increased or decreased or I am just kind of  
20                 curious, it sounds like some people think that it would  
21                 maybe increase for some reason, and maybe that is a  
22                 period where you could shrink it. You know, add a  
23                 little period here for the comments and then shrink it  
24                 back at that final end. Is that, because OMB or  
25                 Justice Department reviews are going to take longer or

1       what?

2                   MS. NADER: Yes, sir.

3                   MR. ROSENSTOCK: That was for DOE, by the way.  
4       That was a question for DOE.

5                   MR. MCCABE:    Yes, Michael McCabe, DOE.

6                   The changes in the schedule that are there  
7       reflect some additional analysis that upon review could  
8       not be done in parallel but are done in sequence and  
9       series.  Particularly, the work that is, discussions  
10      going on or about to start, on the consumer survey,  
11      because that is going to be feeding into the energy  
12      savings analysis, which it had not been fully captured  
13      in some of the earlier schedules.  Also, the, some of  
14      the time periods for some of the steps in the analysis  
15      or in the process, had been unrealistically short.  The  
16      Secretary and OMB reviewed concurrent and lessen time  
17      than what has been done in the past.  So, that this is  
18      a schedule that I feel is now, has all the bugs ironed  
19      out and is reasonable and obtainable.

20                  In looking at the request, one of the things  
21      which I will be looking at in making my recommendations  
22      to Dan Reicher, you know, is again, how will it affect  
23      the overall schedule.  We have some analysis that is  
24      underway.  Any delays of 90 days, for example, would  
25      affect that analysis.  A delay, a shorter delay may not



1       affect it, but I am not sure how short of an extension  
2       we have to get to where it will not affect it. So, be  
3       looking at that. And that is one of the reasons why I  
4       am asking for specifics in order to be able to try to  
5       break up the comments and some different parts to get  
6       some in earlier. And some of the other, later, which  
7       may not be on the critical path.

8               MS. NADER: Thank you. Yes?

9               MR. MARTIN: Michael Martin, California Energy  
10       Commission.

11              We at the Energy Commission have supported in  
12       good faith NECA, the Energy Policy Act, this changing  
13       of procedures and we desperately want to keep out of  
14       getting into this preexemption and petitioning and all  
15       the rest of it. And my commissioners would be very  
16       upset if I was to come back and say that this has  
17       slipped yet another couple of months, you know. We  
18       have acted in good faith on this, this, these various  
19       different steps. And we need to stick with this, with  
20       what we have, the schedule we have here.

21              MR. JONES: Earl Jones, here. G.E.

22              I think everybody, I hope has acted in good  
23       faith, and I think certainly the manufacturers have.  
24       These requests for extensions, are not for the purpose  
25       of delaying this rulemaking if you had to collect the

1 data and do the analysis, you would understand the  
2 complexity of what you are asking us to go through. We  
3 have lost a month in that process through the holidays.  
4 That is just gone. A request for the additional time  
5 is not unwarranted. There is no delay in this process  
6 that you can lay at our doorsteps. If you want to make  
7 adjustments in the schedule internally, I mean, I don't  
8 see any problem with that. And DOE, you know, have  
9 added, whatever your best guess on that is. But, I  
10 don't think, nobody should for any moment suggest that  
11 any part of the delay in this schedule, the slippage is  
12 caused by the manufacturers. It has not been. It is  
13 principally been caused by the Department's own  
14 internal deliberations. And do not put that on our  
15 doorstep. If there is a problem here, look inside the  
16 Department to fix it.

17 Certainly, this request is reasonable and  
18 there is no reason why anybody should deny it or cast  
19 dispersions on the people who are requesting it, for  
20 making it.

21 I do want to make other comments about the  
22 rulemaking generally, when you get into the point, but  
23 I suppose if you are still on the question of the time  
24 table, I will defer those.

25 MS. NADER: Thank you. Other comments on the

1 time period?

2 MR. ROSENSTOCK: Not on the time period. Jim,  
3 are you going to talk about the environmental analysis  
4 now? That was the last step.

5 MS. NADER: Let me just check with Bryan, who  
6 is our leader here. I am concerned about the time. We  
7 were suppose to finish at 4:30 and it is almost 10 to  
8 five now.

9 MR. BERRINGER: Yeah, we have the people on  
10 hold over, that we are going to call in on the consumer  
11 groups. To let them know that we are running behind.  
12 And as Michael said, we will evaluate the comment  
13 period time. And obviously, we will have to a Federal  
14 Register notice to extend, do an extension. So, we  
15 will consider that and get back with everybody on that.

16 MR. MORRIS: Wayne Morris. Bryan, just, not  
17 to belabor this, but is it possible to get an answer to  
18 that before the holidays?

19 MR. BERRINGER: We will try to get you an  
20 answer before the holidays.

21 MR. MCCABE: Michael McCabe. We have got a  
22 meeting with Dan early next week, so that hopefully we  
23 will get his call by then and get it out informally at  
24 least at that time.

25 MS. NADER: Thank you.

1           MR. MCMAHON: The last presentation is the  
2           environmental analysis. It is on the last slide of  
3           that handout. The purpose is to estimate the impacts  
4           from the standards on U.S. emissions of oxides of  
5           carbon, nitrogen and sulphur. The methodology is to  
6           get the power plant emissions from NEMS, when we do the  
7           utility analysis, the emissions will also come out of  
8           the same model. There are two things that NEMS does  
9           not cover that we will add with spreadsheet estimates.  
10          One of those is sulphur oxide emissions from oil fired  
11          water heaters and the other is noxide emissions from  
12          gas fired water heaters in the home.

13                 Are there any questions?

14                 MS. NADER: Steve?

15                 MR. ROSENSTOCK: Steve Rosenstock, Edison  
16          Electric Institute.

17                 Looking at the technical support document, at  
18          Table 12.1, MT/A, what does that refer to? I wasn't  
19          sure what that, was that metric --

20                 MR. MCMAHON: I believe that is million tons  
21          per year.

22                 MR. ROSENSTOCK: Is that million --

23                 MR. MCMAHON: Per anna.

24                 MR. ROSENSTOCK: For anna, million metric  
25          tons?

1 MR. MCMAHON: Yes.

2 MR. ROSENSTOCK: Okay. Okay, it says, well,  
3 again, I still get, I have some problems with this just  
4 because, whether it is really, you know, it is an  
5 energy impact, not an environmental because a lot of  
6 the issues that I said before, about the changing,  
7 especially the changing electric industry, spills over  
8 into this, because as residential customers have  
9 choices of suppliers, and the fact that they might be  
10 able to change suppliers on a yearly or monthly basis,  
11 some of these numbers get very, very interesting. I  
12 mean, it is, you know, with choice there could be some  
13 quite dramatic changes over the 30 years, is what I am  
14 saying. So, that the CO2, NOX and SO2 numbers could  
15 vary widely from household to household. It is not  
16 just the regional model anymore. That is number one.  
17 Especially with on site generation and distributed  
18 generation. And those impacts could also play quite the  
19 role.

20 Also, as a criticism, if you are doing this,  
21 you are neglecting carbon monoxide. And particularly  
22 organic compounds in the in house combustion. Which do  
23 have impacts, which are emissions or pollutants,  
24 whatever the word you want to use.

25 The other thing I was going to say is in

1 terms of both the natural gas and oil, it seems that,  
2 you know, the boundary of the system is a household and  
3 that is it. Whereas, for electricity, you take it from  
4 outside the house to the power plant or generation  
5 source. I don't want to get in -- versus source. You  
6 know, I don't want the arrows thrown at me, but if it  
7 is going to be consistent, then you have to take into  
8 account transmission production losses for natural gas,  
9 as well as fuel oil. I mean, that is, you know, if, if  
10 you want to do that and if you want to, you know,  
11 because there are transmission losses for natural gas.  
12 There are losses for oil as well as production in  
13 transmission.

14 So, I just wanted to put those out there and  
15 especially that, you know, again, assuming, you know, I  
16 think there are going to be a lot of changes in the  
17 power sector, especially when people choose their power  
18 plants. And it going to have quite a dramatic impact  
19 when you look outside the house for some of the actual,  
20 what is the environmental impact of the future Energy  
21 Standards.

22 So, those are my comments. I am glad I made  
23 them late in the day, when some people are tired not to  
24 kill me. Thank you.

25 MS. NADER: Thank you. Yes, sir?

1 MR. GREGG: Tony Gregg, City of Austin.

2 I think this is similar to the other issue of  
3 where they would be emissions savings also from the  
4 electric savings at water utility plants. So, I would  
5 like to see if we could, if they are not factored, if  
6 they could also be factored. Thank you.

7 MS. NADER: Thank you.

8 (Pause.)

9 MS. NADER: Earl, do you say that you had some  
10 comments?

11 MR. JONES: Yes. Just a minute, please.

12 MS. NADER: I would ask that they be very  
13 brief.

14 MR. JONES: They will be.

15 Well, I just wanted to sort of leave my  
16 comments on the workshop. I still continue to be very  
17 impressed by the progress that DOE has made in the  
18 process improvements. And I really mean that. That is  
19 the positive introduction. And I mean that the --

20 But, seriously, Bryan, I mean, a lot of  
21 effort has been put into this and I can see the work  
22 and a lot of it is much more understandable. Which is  
23 very important for me, at least. But, I am, when I  
24 come to the workshops, and this one is similar in that  
25 respect, I have this sense of progress two steps

1 forward and one step back. Because at the same time we  
2 are making these great strides towards understanding  
3 and transparency, at least, speaking in English, etc.  
4 There is a whole another half of this rulemaking which  
5 is still very much in the black box. And that I am  
6 afraid is these analysis and these models, which we  
7 don't, I do not understand how it is going to finally  
8 impact this rulemaking. But, I have this awful feeling  
9 that to spite all the positive things that are  
10 happening, there is this thing waiting out there and it  
11 is going to bounce.

12 So, there is a real credibility problem with  
13 the rulemaking. And I just want to stress the  
14 importance between now and the next phase, getting  
15 through the NOPR to try to close that gap to increase  
16 the ability of the participants to understand where  
17 the, how the data is being used, how it is going to  
18 impact, how it is going to, how the second half, if you  
19 will, is going to now come back into the picture. And  
20 affect the, what I consider a very good analysis having  
21 been done to date. This is a very serious question.  
22 There is a real issue of being able to make this  
23 process work. Let's understand that we understand,  
24 that we know that everybody is not going to be pleased  
25 the way this thing works out. That is the way the



1 process works and that is just the way it falls.

2 But, in the process of doing that, people  
3 should have clear understanding of how they are going  
4 to be impacted. And there should be few surprises.  
5 And I am concerned that there will be more surprises in  
6 the wings. And I think I would like to try to avoid  
7 them as much as possible. Thank you.

8 MS. NADER: Thank you. Anything else,  
9 anyone must say before we call it a day? Okay. Thank  
10 you. You all have worked very hard. I appreciate your  
11 active engagement.

12 Bryan, would you like to say the last few  
13 words?

14 MR. BERRINGER: I would just like to thank  
15 everybody for sticking around. We will probably, take  
16 a couple of minutes and then we will go over to -- The  
17 people that want to stay for the consumer working group  
18 it is right across the hall. We have the phone hooked  
19 up, so people, everybody is welcome to that, come to  
20 that meeting. It is open. If people want to stay here  
21 and they will have some time if they want discuss other  
22 things.

23 Again, thank you very much.

24 (Whereupon, at 5:10 p.m., the meeting was  
25 concluded.)